

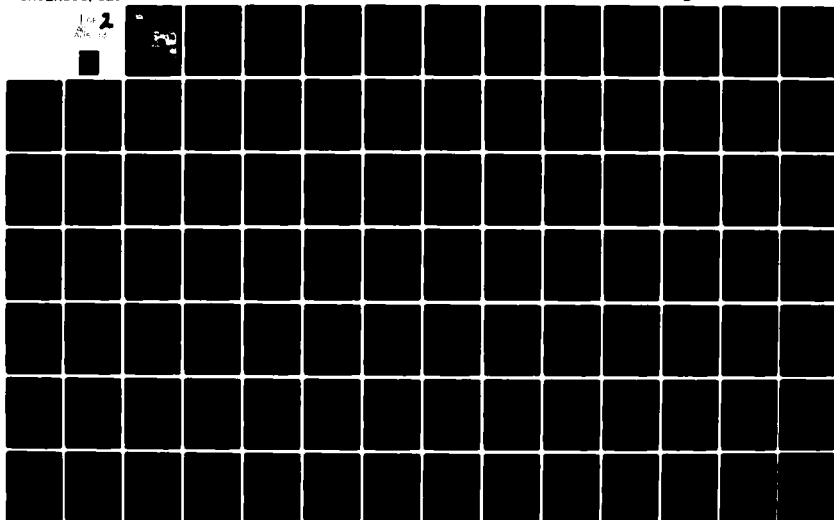
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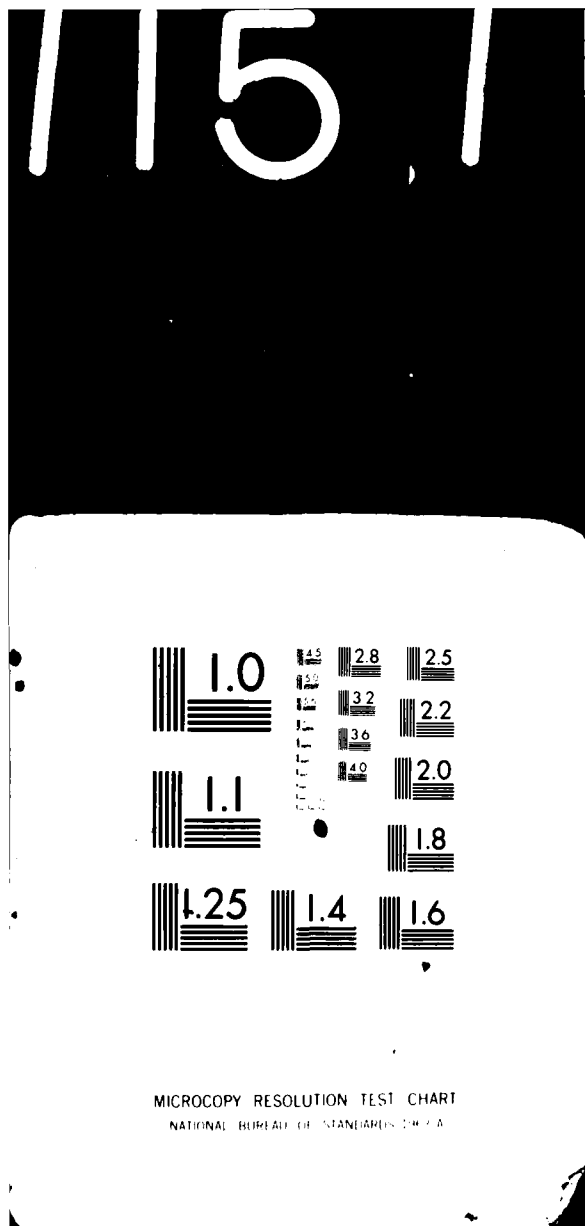
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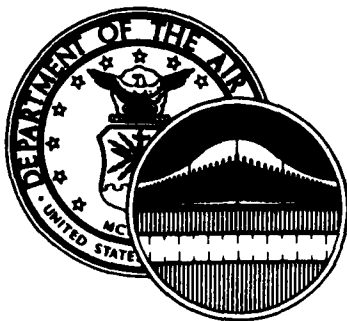
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UNITED STATES AIR FORCE

# OCCUPATIONAL SURVEY REPORT



JET ENGINE MECHANIC

AND

TURBOPROP PROPULSION MECHANIC CAREER LADDERS

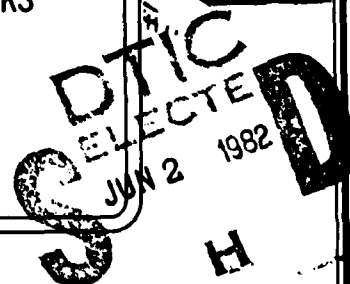
AFSCs 426X2/426X3

AFPT 90-426-424

APRIL 1982

OCCUPATIONAL ANALYSIS PROGRAM  
USAF OCCUPATIONAL MEASUREMENT CENTER  
AIR TRAINING COMMAND  
RANDOLPH AFB, TEXAS 78150

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# DISTRIBUTION OF 426X2 AND 426X3 OSR AND SUPPORTING DOCUMENTS

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AFHRL/LRT	1	1	1m	1m/1h
AFHRL/MODS	2	6	1m	1m
AFLMC/LGM	2	2		2
AFLMC/XR	1			1
AFMEA/MEMD	1	1	1h	1
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HQ ATC/DPAE	3	3		3
HQ ATC/TTQ	2	1		1
HQ MAC/DPAT	3	3		3
HQ PACAF/DPAL	1	1		1
HQ PACAF/DPAT	3	3		3
HQ SAC/LGMQ (ATCLO)	1	1		1
HQ SAC/DPAT	3	3		3
HQ TAC/DPAT	3	3		3
HQ TAC/DPLATC	1	1		1
HQ TAC/LGQT	2	2		2
HQ USAF/LEYM	1	1		1
HQ USAF/MPPT	1	1		1
HQ USAFE/DPAT	3	3		3
HQ USAFE/DPATC	1	1		1
HQ USMC/OMU	1	1		
LMDC/AN	1			
NODAC	1	1		
355 TTW/MAT	2	2		2
3330 TCHTW/TTGX (Chanute AFB IL)	6	2	2h	10h
388 TFW/MAT	2	2		2
3507 ACS/DPUI	1	1		
3785 FLDTG/TTFO	2	2		2

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## PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Jet Engine Mechanic and Turboprop Propulsion Mechanic career ladders (AFSCs 426X2 and 426X3). The project was directed by USAF Program Technical Training, Volume Two, dated June 1980. Computer printouts from which this report was produced are available for use by operating and training officials.

The survey instrument was developed by Hank Dubois, Inventory Development Specialist, with computer programming support furnished by Sergeant Harold R. Tackett. Mr. Robert L. Alton, Occupational Survey Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Survey Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are distributed to air staff sections, major air commands, and other interested training and management personnel. Additional copies are available upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Analysis Branch (OMY), Randolph AFB, Texas 78150.

This report has been reviewed and is approved.

PAUL T. RINGENBACH, Col, USAF  
Commander  
USAF Occupational Measurement  
Center

WALTER E. DRISKILL, Ph.D.  
Chief, Occupational Analysis Branch  
USAF Occupational Measurement  
Center



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## SUMMARY OF RESULTS

1. Survey Coverage: The Jet Engine Mechanic and Turboprop Propulsion Mechanic career ladders were surveyed to obtain current data for use in training management decisions. A combined job inventory was administered worldwide between November 1980 and March 1981. The 3,610 respondents comprising the final survey sample included 2,615 members holding DAFSC 426X2 (82 percent of the eligible assigned personnel), 848 airmen reporting DAFSC 426X3 (74 percent of the eligible assigned personnel), and 138 DAFSC 42699 personnel (88 percent of the eligible assigned personnel). Both career ladders, as well as all major commands, were well represented in the survey sample.

2. Specialty Jobs (Career Ladder Structure): There were five job clusters and 13 independent job types identified in the analysis which were broadly grouped into six general functional areas: (1) Flightline Maintenance (with distinct groupings of 426X2 and 426X3 personnel); (2) Test Cell (including both 426X2 and 426X3 personnel); (3) General Shop Maintenance (with distinct engine and propeller groups); (4) Management Staff (both AFSCs represented); (5) Specialized Shop Maintenance (predominantly 426X2 personnel); and (6) Supply, Administrative, and Training (including 426X2 and 426X3 members). Where maintenance was performed was the primary distinguishing feature of the maintenance job groups.

3. Career Ladder Progression: In both career ladders, the 3- and 5-skill level jobs were highly technical, with very little responsibility for supervision or management. Seven-skill level members of both ladders, although still performing many technical tasks, spent the majority of their duty time in supervisory, managerial, or administrative functions. Nine-skill level airmen perform predominantly staff jobs involving supervision and management, administration and training, and quality control functions.

4. AFR 39-1 Specialty Descriptions: The current descriptions were found to be complete and to accurately portray the nature of the jobs in each career ladder.

5. Training Analyses: The STS for each career ladder is supported by the survey data. POIs for both ladders generally are supported by survey data with only a few course blocks requiring review by subject matter and training specialists due to low percentages of airmen performing and low task difficulty or training emphasis ratings. There were also some tasks that were not matched to the 426X3 POI which had high training emphasis ratings and high percentages of first-term airmen performing them.

6. AFSC 426X0-426X3 Merger Analysis: Prior Aircraft Propeller Mechanic personnel (AFSC 426X0) have been effectively assimilated into the 426X3 career ladder and 426X3 airmen are, on the whole, performing essentially the full range of Turboprop Propulsion Mechanics' duties.

7. Career Ladder Differences: There are clearly areas of commonality between the two ladders with regard to paperwork and supply functions. To a considerable degree, performance of some technical maintenance tasks are applicable to systems and components of either jet or turboprop engines.

There are also, however, clear distinctions between the two AFSCs, based on systems peculiar to jet or turboprop engines, and, most distinctive of all, propellers. Almost no 426X2 personnel perform tasks pertaining to propeller maintenance.

8. Implications: (1) The projected decline in aircraft using the J-57 (and to some degree the J-79) engine, coupled with the current and projected increase in numbers of F-100 engines in the field, indicate that the resident technical school may need to acquire the F-100 engine for use in representative training. (2) Low job satisfaction indicators and the number of personnel involved in the supply support functions of these career ladders require the attention of career field managers. (3) Although there are some specialized jobs for 426X2 personnel, no changes are recommended in the airmen classification structure.



OCCUPATIONAL SURVEY REPORT  
JET ENGINE MECHANIC AND TURBOPROP  
PROPULSION MECHANIC CAREER LADDERS  
(AFSCs 426X2 AND 426X3)

INTRODUCTION

This is a report of an occupational survey of the Jet Engine Mechanic (AFSCs 42632, 42652, 42672, and 42699) and Turboprop Propulsion Mechanic (AFSCs 42633, 42653, 42673, and 42699) career ladders completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in April 1982. The survey was requested by Chanute Technical Training Center (CTTC/TTGXA) to obtain current data for use in the evaluation and management of training programs for these career ladders. Previous survey results regarding the 426X2 career ladder were published in December 1972. This report reflects the initial analysis of the 426X3 career ladder.

Background

The Jet Engine Mechanic career ladder's current 426X2 designation was assigned in April 1976. Prior to that date, the specialty was generally stable with two AFSC changes occurring since the jet engine maintenance area was established in 1951. The latest change to the career ladder, while not resulting in a name or code change, was the withdrawal of turboprop engine maintenance responsibility in October 1979 when those functions were moved to the newly established AFSC 426X3.

The Turboprop Propulsion Mechanic career ladder was established in October 1979. The AFSC was created when the responsibilities for turboprop and turboshaft engine maintenance and turboprop propeller maintenance were combined into one career ladder. Turboprop engine maintenance previously was part of the AFSC 426X2 Jet Engine Mechanic career ladder while turboprop propeller maintenance was part of the recently deleted (October 1979) AFSC 426X0, Aircraft Propeller Mechanic ladder. Both 426X2 and 426X3 ladders are included under a common Superintendent level AFS (Aircraft Propulsion Superintendent, AFSC 42699) and Chief Enlisted Manager Code (CEM) 43200, Aircraft Maintenance Manager.

As described in AFR 39-1 specialty descriptions, personnel in the 426X2 career ladder are responsible for inspecting, removing, installing, repairing, assembling, disassembling, troubleshooting, servicing, testing, and modifying turbojet and turboprop aircraft engines and small gas turbine engines. Personnel in the 426X3 career ladder have similar responsibilities for turboprop aircraft engines and propellers and small gas turbine engines. They also perform intermediate maintenance on turboshaft helicopter engines and maintain associated equipment.

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Primary entry into these career ladders is from Basic Military Training School (BMTS) through a Category A eight-week formal training course for 426X2 personnel (3ABR42632) and a Category A ten-week formal training course for 426X3 personnel (3ABR42633), both of which are conducted at Chanute TTC, Illinois.

Since this report encompasses two career ladders, each with different engine responsibilities, and separate Specialty Training Standards (STS) and training courses, this report is divided into four sections. The first section deals with the career ladder structure utilizing the total sample of both 426X2 and 426X3 personnel. Sections II and III discuss the separate ladders, including such topics as: (1) comparison of the pertinent job structure and other survey data with career ladder documents, such as AFR 39-1 Specialty Descriptions and Specialty Training Standards; (2) analyses of Total Active Federal Military Service (TAFMS) groups and Duty Air Force Specialty Code (DAFSC) groups; (3) analyses of Continental United States (CONUS) versus overseas groups; (4) analyses of major command (MAJCOM) groups; and (5) comparison of current survey data with previous survey data (426X2 only). Section IV contains discussion regarding the commonalities and differences between the two ladders.

## SURVEY METHODOLOGY

### Inventory Development

The data collection instrument of this occupational survey was USAF Job Inventory AFPT 90-426-424, dated October 1980. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, tasks from previous survey instruments, and data from the last occupational survey report (OSR). The task list was then evaluated in the field through personal interviews with 31 subject matter specialists from six bases. The resulting job inventory contained a comprehensive listing of 587 tasks grouped under 16 duty headings and a background section containing such information as grade, duty title, time in service, job satisfaction, and the types of engines worked on.

### Survey Administration

From November 1980 through March 1981, Consolidated Base Personnel Offices (CBPOs) in operational units worldwide administered the inventory to job incumbents holding DAFSCs 426X2 or 426X3. These job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in their current job. After checking all tasks performed, each member then rated each of these tasks on a nine-point scale showing relative time spent on that task as compared to all other tasks checked. The ratings ranged from one (very small amount time spent) through five (about average time spent) to nine (very large amount time spent).

To determine relative time spent for each task checked by a respondent, all of an incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

### Survey Sample

Personnel were selected to participate in this survey so as to ensure an accurate representation across major commands (MAJCOM) and paygrade groups. All eligible DAFSC 426X3 personnel were mailed survey booklets, while DAFSC 426X2 personnel, due to the large career ladder population, were selected to participate in this survey by a stratified random sample process. Table 1 reflects the percentage distribution, by major command, of assigned personnel in the career ladders as of October 1980. Also listed in this table is the percent distribution, by major command, of respondents in the final survey sample. The 2,615 respondents included in the final sample

who held DAFSC 426X2 represent 82 percent of the 426X2 career ladder personnel eligible for the survey, while the 848 personnel holding DAFSC 426X3 represent 74 percent of the 426X3 career ladder population eligible for the survey. And, finally, 88 percent (138) of the DAFSC 42699 personnel eligible for the survey (157) are represented in the final total sample of 3,610 airmen.

Table 2 reflects the paygrade group distributions, while Table 3 lists the sample distribution by TAFMS groups. Fifty-eight percent of the 426X2 respondents and 65 percent of the 426X3 personnel are in grades E-1 through E-4 (see Table 2) and over 50 percent of the personnel in both ladders are in their first enlistment (see Table 3). As reflected in these tables, the survey sample is a very good representation of the career ladder populations.

TABLE 1

## COMMAND REPRESENTATION OF SURVEY SAMPLE

COMMAND	AFSC 426X2		AFSC 426X3		AFSC 42699	
	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
TAC	32	32	6	6	27	33
SAC	19	21	-	-	19	18
MAC	16	17	76	79	19	26
USAFE	11	10	4	5	14	10
ATC	9	11	6	7	6	5
PACAF	5	4	3	2	4	2
AFSC	2	2	1	1	4	4
AFLC	1	2	-	-	1	1
AAC	1	1	-	-	-	-
OTHER	4	*	4	-	6	1
TOTAL	100	100	100	100	100	100

TOTAL 426X2 PERSONNEL ASSIGNED - 9,704

TOTAL ELIGIBLE 426X2 PERSONNEL SURVEYED\*\* - 3,185\*\*\*

TOTAL 426X2 OCCUPATIONAL SURVEYS RETURNED - 2,615

RETURN RATE - 82%

TOTAL 426X3 PERSONNEL ASSIGNED - 1,301

TOTAL ELIGIBLE 426X3 PERSONNEL SURVEYED\*\* - 1,146

TOTAL 426X3 OCCUPATIONAL SURVEYS RETURNED - 848

RETURN RATE - 74%

TOTAL 42699 PERSONNEL ASSIGNED - 167

TOTAL ELIGIBLE 42699 PERSONNEL SURVEYED\*\* - 157

TOTAL 42699 OCCUPATIONAL SURVEYS RETURNED - 138

RETURN RATE - 88%

\* DENOTES LESS THAN .5 PERCENT

\*\* EXCLUDES PERSONS IN PCS STATUS, HOSPITAL, OR LESS THAN SIX WEEKS ON THE JOB

\*\*\*STRATIFIED RANDOM SAMPLE

NOTE: MANNING FIGURES AS OF OCTOBER 1980

TABLE 2  
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

PAYGRADE	AFSC 426X2		AFSC 426X3		AFSC 42699	
	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
AIRMAN	36	34	33	40	-	-
E-4	26	24	27	25	-	-
E-5	20	22	20	18	-	-
E-6	12	14	13	13	-	-
E-7	6	6	7	4	-	41
E-8	-	-	-	-	100	56
OTHER*	-	-	-	-	-	3

\* INCLUDES FIVE INDIVIDUALS IN PAYGRADE E-9

NOTE: MANNING FIGURES ARE AS OF MARCH 1980. CEM CODE 43200 PERSONNEL WERE NOT SURVEYED;  
THEREFORE, SPECIFIC E-9 DATA IS NOT PRESENTED

TABLE 3  
TAFMS DISTRIBUTION OF SURVEY SAMPLE

<u>TAFMS (MONTHS)</u>	<u>PERCENT OF SAMPLE (AFSC 426X2)</u>	<u>PERCENT OF SAMPLE (AFSC 426X3)</u>	<u>PERCENT OF SAMPLE (AFSC 42699)</u>
1-48	52	57	-
49-96	16	16	-
97-144	11	10	-
145-192	11	9	5
193-240	8	6	44
241+	<u>2</u>	<u>2</u>	<u>51</u>
TOTAL	100	100	100

### Task Factor Administration

In addition to completing the job inventory, selected senior 426X2 and 426X3 personnel were also asked to complete a second booklet for rating either training emphasis (TE) or task difficulty (TD). The TE and TD booklets are processed separately from the job inventories. The rating information is then used in a number of different analyses discussed in more detail within the report.

Task Difficulty. Each individual completing a task difficulty booklet was asked to rate the tasks on a nine-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory (426X2 members did not rate tasks relating to propeller maintenance). Difficulty is defined as the length of time required by the average member to learn to do the task. Task difficulty data were independently collected from experienced 7- and 9-skill level personnel (65 AFSC 426X2 raters and 34 AFSC 426X3 raters) stationed worldwide (see Tables 4 and 5). These raters were also asked to indicate which engines they maintained or on which they supervised maintenance. A review of rater responses indicates their engine experience is very similar to that of each career ladder as a whole. For example, 25 percent of the 426X2 raters indicated association with the J-57 engine versus 21 percent of the total 426X2 sample, indicating excellent balance between the raters and the total sample. The interrater reliability (as assessed through components of variance of standard group means) was .96 for 426X2 raters and .94 for 426X3 raters, which reflects a high agreement among career ladder raters. Ratings were adjusted so tasks of average difficulty have ratings of 5.00. The resulting data are essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Training Emphasis. Individuals completing training emphasis booklets were asked to rate tasks on a ten-point scale from no training required to extremely heavy training required (426X2 members did not rate tasks relating to propeller maintenance). Training emphasis is a rating of which tasks require structured training for first-term personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. Training emphasis data were independently collected from experienced 7- and 9-skill level personnel (119 AFSC 426X2 raters and 61 AFSC 426X3 raters) stationed worldwide (see Tables 4 and 5). As with the task difficulty raters, these raters also indicated which engines they were involved with, and also reflected very similar engine associations when compared with the individual career ladder sample responses. The interrater reliability (as assessed through components of variance of standard group means) was .99 for 426X2 raters and .94 for 426X3 raters, indicating that, within each career ladder, there was very high agreement among raters as to which tasks required some form of structured training and which did not. In the 426X2 ladder, tasks rated highest in training emphasis had ratings of 4.2 and above, with an average emphasis rating of 2.2. Tasks rated highest in training emphasis in the 426X3 ladder had ratings of 5.0 and above, with an average training emphasis rating of 3.4.



When used in conjunction with other factors, such as percent members performing, the task difficulty and training emphasis ratings can provide an insight into training requirements. This may help validate the lengthening or shortening of specific units of instruction in various training programs.

TABLE 4

## COMMAND DISTRIBUTION OF 426X2 TASK DIFFICULTY AND TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
TAC	32	28	37
SAC	19	25	21
MAC	16	11	13
USAFE	11	22	13
ATC	9	11	9
PACAF	5	1	3
OTHER	<u>8</u>	<u>2</u>	<u>4</u>
TOTAL	100	100	100

TABLE 5

## COMMAND DISTRIBUTION OF 426X3 TASK DIFFICULTY AND TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
MAC	76	68	74
TAC	6	15	5
ATC	6	17	13
USAFE	4	-	7
PACAF	3	-	-
AFSC	1	-	1
OTHER	<u>4</u>	<u>-</u>	<u>-</u>
TOTAL	100	100	100

## SECTION I

### SPECIALTY JOBS (CAREER LADDER STRUCTURE)

A key aspect of the USAF occupational analysis program is to examine the structure of the career ladders--what people are actually doing in the field, rather than how official career field documents say they are organized. This analysis of actual jobs performed is made possible by the use of the Comprehensive Occupational Data Analysis Program (CODAP). This job information is used to examine the accuracy and completeness of career ladder documents (AFR 39-1 Specialty Descriptions and Specialty Training Standards) and to formulate an understanding of current utilization patterns.

#### Overview of Specialty Jobs

Overall, the survey sample can be separated into six general groupings of personnel: Flightline Maintenance, Test Cell, General Shop Maintenance, Specialized Shop Maintenance, Management Staff, and Supply, Administrative, and Training personnel. Within these general groupings, there are both AFSC specific groups and groups with personnel from both specialties. Management staff and administrative type support personnel groups contain members of both AFSCs, with grouping occurring on the basis of tasks common to managerial, training, and administrative functions, with AFSC specific tasks a secondary factor. Within the maintenance functional areas, groupings are based primarily on tasks performed either on the flightline or in a general or specialized shop environment, with test cell personnel more closely aligned with flightline members than with in-shop workers. While a number of similar tasks involving the basic components of the jet engine (i.e., turbine, compressor) are performed by personnel of both 426X2 and 426X3 specialties, ladder distinctions are clear when tasks pertaining to engine accessory systems and propellers are examined.

Based on task similarity and relative percent time spent, the best division of jobs performed in the 426X2 and 426X3 career ladders is illustrated in Figure 1. These clusters, job types, and independent job types are listed below. The group (GRP) number shown beside each title is a reference to computer printed information. The letter N stands for the number of personnel in the group.

#### FLIGHTLINE MAINTENANCE FUNCTIONAL AREA

- I. AIRCRAFT SERVICING PERSONNEL (GRP207, N=51)
- II. FLIGHTLINE TURBOPROP ENGINE MAINTENANCE PERSONNEL CLUSTER (GRP353, N=342)
  - a. Flightline Engine and Propeller Maintenance Specialists (GRP499, N=277)
  - b. Flightline Propeller Maintenance Specialists (GRP383, N=26)
  - c. Turboprop Phase Dock Specialists (GRP377, N=39)
- III. FLIGHTLINE JET ENGINE MAINTENANCE PERSONNEL CLUSTER (GRP332, N=699)
  - a. Flightline Jet Engine Maintenance Specialists (GRP475, N=540)
  - b. Jet Phase Dock Specialists (GRP621, N=40)
  - c. Trim Pad Specialists (GRP519, N=29)

#### TEST CELL FUNCTIONAL AREA

- IV. TEST CELL PERSONNEL (GRP297, N=152)

#### GENERAL SHOP MAINTENANCE FUNCTIONAL AREA

- V. IN-SHOP ENGINE MAINTENANCE PERSONNEL CLUSTER (GRP149, N=842)
  - a. Engine Build-Up or Tear Down Specialists (GRP448, N=627)
  - b. Turboprop Quick Engine Change (QEC) Kit Specialists (GRP487, N=29)
  - c. Small Gas Turbine Repair and Testing Specialists (GRP458, N=25)
  - d. Jet QEC Kit Specialists (GRP374, N=13)
- VI. PROPELLER SHOP MAINTENANCE PERSONNEL (GRP161, N=46)

#### SPECIALIZED SHOP MAINTENANCE FUNCTIONAL AREA

- VII. BALANCE SHOP SPECIALISTS (GRP212, N=27)
- VIII. AFTERBURNER MECHANICS (GRP169, N=22)
- IX. ENGINE ACCESSORY REPAIRMEN (GRP200, N=25)
- X. SMALL GAS TURBINE MECHANICS (GRP176, N=35)

#### MANAGEMENT STAFF FUNCTIONAL AREA

- XI. HEADQUARTERS STAFF PERSONNEL (GRP450, N=24)
- XII. PROPULSION BRANCH MANAGEMENT PERSONNEL CLUSTER (GRP112, N=342)
  - a. General Supervisory Personnel (GRP240, N=278)
  - b. OJT Program Monitors (GRP557, N=10)
- XIII. QUALITY CONTROL TECHNICIANS (GRP320, N=61)
- XIV. QEC KIT MONITORS (GRP329, N=17)

#### SUPPLY, ADMINISTRATION, AND TRAINING FUNCTIONAL AREA

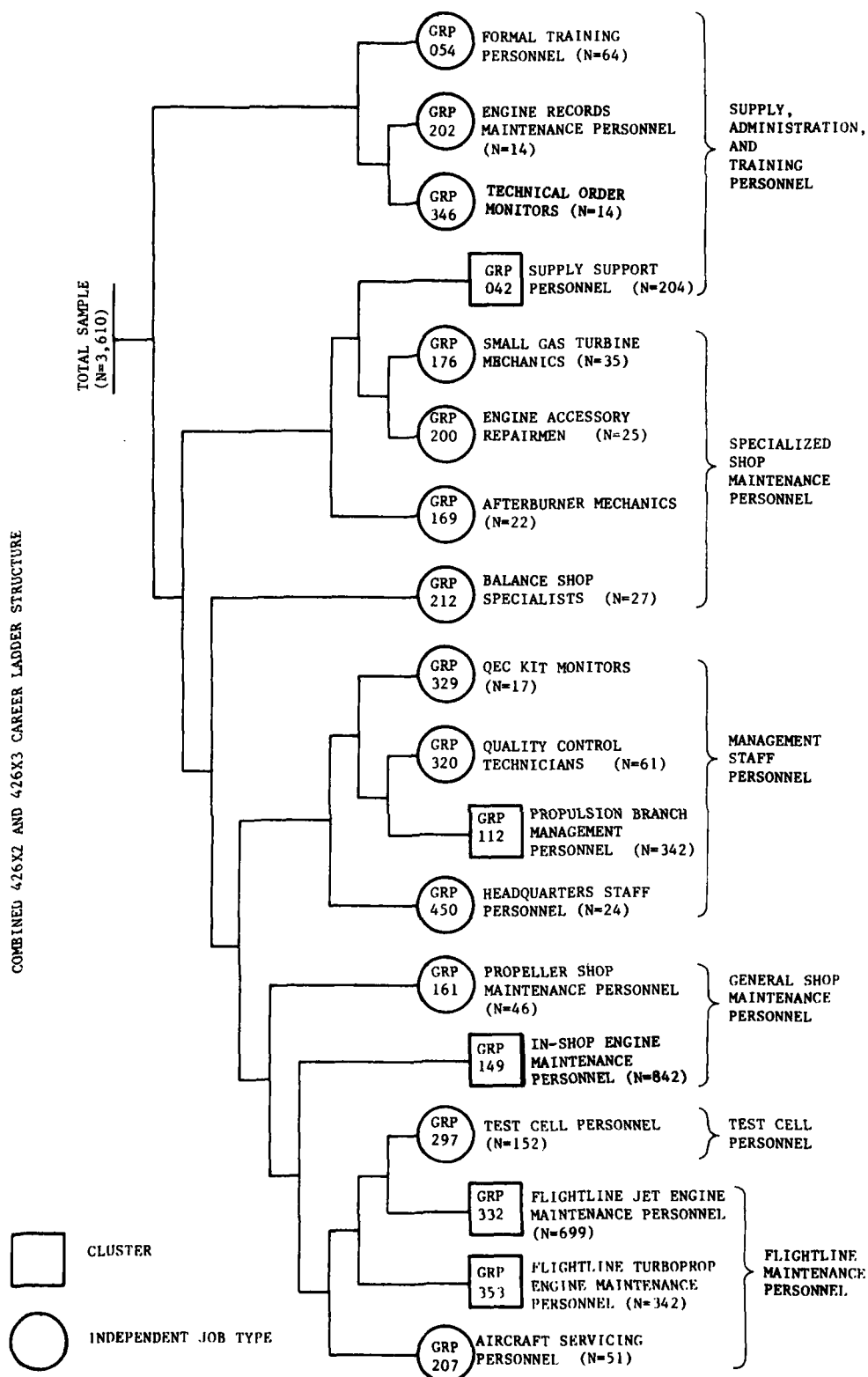
- XV. SUPPLY SUPPORT PERSONNEL CLUSTER (GRP042, N=204)
  - a. Materiel-Aerospace Ground Equipment (AGE) Support Personnel (GRP102, N=84)
  - b. Tool Crib Personnel (GRP220, N=87)
- XVI. TECHNICAL ORDER (TO) MONITORS (GRP346, N=14)
- XVII. ENGINE RECORDS MAINTENANCE PERSONNEL (GRP202, N=14)
- XVIII. FORMAL TRAINING PERSONNEL (GRP054, N=64)

Eighty-three percent of the respondents in the sample perform jobs generally equivalent to the five clusters and 13 independent job types listed above. The remaining 17 percent were performing tasks or series of tasks that did not group with any of the defined job types. Some of the job titles given by respondents which were representative of these personnel included Front Board Controller, Mobility NCO, Maintenance Debriefing, and Sound Suppressor Crewman.

#### Group Descriptions

The following paragraphs contain brief job descriptions of the clusters and independent job types identified through the career ladder structure analysis. Selected background and job satisfaction data are provided for these groups in Tables 6 and 7. Representative tasks (and additional data regarding engines and aircraft maintained) for all clusters (as well as job types within clusters) and independent job types are contained in Appendix A.

FIGURE 1  
COMBINED 426X2 AND 426X3 CAREER LADDER STRUCTURE



## Flightline Maintenance Functional Area

I. AIRCRAFT SERVICING PERSONNEL (GRP207). This independent job type of 51 airmen is comprised of both 426X2 and 426X3 personnel, with the majority (79 percent) holding 426X2 DAFSCs. With 69 percent serving in overseas assignments, they perform a job keyed primarily to flightline support and mission turnaround of a variety of aircraft. Although they average over five years in the career field, the job they perform is fairly limited in scope, with the majority of their job time devoted to performance of an average of only 66 relatively simple tasks (34 tasks utilized 50 percent of their job time). Typical tasks include:

- launching or recovering aircraft
- servicing engine oil systems
- performing single-point aircraft refueling or defueling
- removing or replacing aircraft wheel assemblies
- washing aircraft
- removing or installing engines
- preparing aircraft for engine removals or installations

II. FLIGHTLINE TURBOPROP ENGINE MAINTENANCE PERSONNEL CLUSTER (GRP353). This cluster of 342 airmen represents nine percent of the survey sample. Consisting primarily of 426X3 career ladder personnel (95 percent of the group), 61 percent of the incumbents hold DAFSC 42653 and 18 percent report DAFSC 42673. With the vast majority assigned to MAC and supporting the T-56 turboprop engines of the C-130 aircraft, 76 percent of the relative job time of cluster personnel is spent in the performance of technical tasks and duties relating to flightline-oriented maintenance as well as general engine and propeller maintenance. As a result of having responsibility for maintaining both engines and propellers, the group performs the highest average number of tasks (129) of all groups identified in the sample. Typical tasks are:

- removing or installing propellers on aircraft
- removing or installing engines in aircraft
- isolating malfunctions in temperature datum or negative torque systems
- isolating propeller malfunctions
- isolating malfunctions in engine oil or starter systems
- removing or replacing engine fuel system components

Within this cluster are three separate job groups. The largest of the three groups performs both engine and propeller maintenance tasks. Although, as mentioned above, most of these airmen are associated with the T-56 engine, one small subgroup (14 members) was identified whose primary job involved maintenance of the engines and propellers for the OV-10 aircraft. The remaining two job groups in the cluster were differentiated by their concentration of time on propeller maintenance tasks and tasks dealing with phase dock inspections and maintenance procedures.

III. FLIGHTLINE JET ENGINE MAINTENANCE PERSONNEL CLUSTER (GRP332). Representing 19 percent of the survey sample, the 699 airmen in this cluster spend 69 percent of their relative job time on duties and technical tasks related to flightline maintenance of various jet engines (the most common engines are the J-57, J-79, TF-33, and F-100). Eighty-four percent of these incumbents report possession of a 5- or 7-skill level DAFSC (57 percent and 27 percent respectively) and perform an average of 94 tasks. Tasks typical of the job performed are:

- removing or installing engines on aircraft
- performing operational checks on installed engines or related systems
- aligning installed engines
- isolating malfunctions on constant speed drive (CSD) systems
- removing or installing engine pressure ratio (EPR) system components
- adjusting operating aircraft engines
- rigging engine throttle systems to firewalls

Personnel in this cluster are distinguished from the previously discussed turboprop engine personnel by the lack of performance of propeller maintenance tasks, and by maintenance of such engine-related systems as constant speed drive and engine pressure ratio systems. Although some subgroups of airmen within this cluster could be isolated due to performance of tasks pertaining to systems peculiar to certain types of engines (i.e., afterburner, thrust reverser, or water injection systems), by and large the greater number of common engine systems maintained (such as anti-icing, bleed-air, and fuel systems) bonds this group of airmen into a common flightline maintenance job.

Of the three groups which form this cluster, two were small somewhat specialized groups primarily performing trim pad or jet phase dock function tasks. The largest of the three groups performs a job which is much the same as that described above for the cluster as a whole. Although the overall cluster is predominantly 426X2 personnel (92 percent), within this large job type (Flightline Jet Engine Maintenance Specialists) were two small subgroups of 426X3 airmen. These turboprop engine mechanic groups were isolated from the previously discussed 426X3 flightline cluster by the absence of propeller maintenance activity.

#### Test Cell Functional Area

IV. TEST CELL PERSONNEL (GRP297). This independent job type of 152 airmen is comprised of both 426X2 and 426X3 personnel, with the majority (86 percent) holding 426X2 DAFSCs. Although subgroups of personnel were identifiable due to orientation toward supervisory or turboprop engine specific tasks, the overall job of this highly experienced group (with an average of 74 months in the career field and 83 months in the service, they are the most experienced of any direct maintenance groups in the sample) is operating and checking engines in test cell environments. Mostly 5-skill and 7-skill level personnel (59 percent and 32 percent respectively), they perform an average of 89 tasks, some of which are similar to those of the flightline groups (such as isolating engine or various system malfunctions). Tasks which differentiate these airmen from flightline and in-shop maintenance groups include:



analyzing engine operations during test cell runs  
computing engine thrust or efficiency on test cells  
maintaining test cells  
preserving or depreserving engine fuel systems  
installing test cell adapter kits

While these airmen do perform some supervisory functions, their job is highly technical in nature, with 78 percent of their job time spent on tasks involving test cell and general engine maintenance functions, along with the administrative procedures required in the maintenance program.

#### General Shop Maintenance Functional Area

V. IN-SHOP ENGINE MAINTENANCE PERSONNEL CLUSTER (GRP149). Comprised of four different job type groups and representing the largest single group in the career ladder structure (842 members and 23 percent of the total sample), these incumbents are predominantly 426X2 personnel (86 percent). In contrast to the previously described flightline job groups, the work performed by these airmen is done almost exclusively in a shop setting. While three smaller job groups are identified by their sub-specializations on tasks involving QEC kit installation and small gas turbine engine repair and testing, the largest of the four job groups, Engine Build-Up and Tear Down Specialists, defines the essence of the job for the cluster as a whole (sub-groups of supervisory technicians and 426X3 in-shop maintenance personnel were identifiable within this group). Spending 76 percent of their relative job time on duties and tasks pertaining to general and in-shop engine maintenance functions, these mostly 5- and 3-skill level members (65 percent and 20 percent respectively) disassemble and assemble major engine components and systems. Of the average 73 tasks performed, typical ones include:

removing or installing engine bearings and seals  
assembling or disassembling turbine units  
removing or installing compressors or turbine rotors  
blending compressor or turbine blades  
cleaning engines or engine parts

With an average grade between E-3 and E-4 and 69 percent reporting that they are in their first enlistment (39 percent are in the 1-24 month first job category), these airmen are somewhat less experienced than the previously described groupings of flightline and test cell maintenance personnel (see Table 6 for additional comparisons).

VI. PROPELLER SHOP MAINTENANCE PERSONNEL (GRP161). Tasks performed in the maintenance of the 54H60 propeller (96 percent of these personnel report maintaining this particular propeller) distinguish this in-shop maintenance group from the engine maintenance personnel discussed above. The 46 airmen in this independent job type group are almost exclusively 426X3 career ladder members (five percent of the total 426X3 sample) and devote 74 percent of their relative job time to performance of duties and tasks

involving general and in-shop propeller maintenance. Job time pertaining to engine maintenance is practically nil. Of the average 104 tasks (only 56 tasks account for over 50 percent of their relative job time) performed by the incumbents, typical tasks include:

- removing or installing brush block assemblies
- removing or installing propeller blades on hubs
- assembling or disassembling pump housings
- assembling or disassembling dome assemblies
- removing or installing spinner center sections

#### Specialized Shop Maintenance Functional Area

VII. BALANCE SHOP SPECIALISTS (GRP212). This small group of 27 predominantly first-term airmen (85 percent) perform a very specialized job composed of tasks generally rated above average in difficulty. The majority of the group report holding DAFSC 42652 (78 percent) with 15 percent indicating DAFSC 42632. Devoting 48 percent of their relative job time to tasks pertaining to balance shop functions, an additional 33 percent is spent on in-shop engine maintenance functions and administrative paperwork. Typical of the specialized tasks performed by these airmen are:

- dynamically balancing turbines and compressors
- weighing turbine blades or compressor rotor blades
- grinding webs of compressor wheels or turbine rotors
- maintaining balance shop equipment
- testing for rotor balance

VIII. AFTERBURNER MECHANICS (GRP169). Comprised entirely of 426X2 airmen, this small (22 members) independent job type group spends 66 percent of their relative job time performing a very limited technical job (averaging only 17 tasks) involving maintenance of tactical type aircraft engine afterburners. Typical tasks performed include:

- assembling or disassembling afterburners
- adjusting afterburner nozzles
- maintaining afterburner repair equipment
- inspecting afterburners
- rigging afterburner systems
- removing or installing afterburner system components

Personnel forming this group are the least experienced of all identified groups, with 91 percent reporting that they are serving in their first enlistment. Their 26 months average time in career field and 27 months average time in service are the lowest of any job type in the sample.

IX. ENGINE ACCESSORY REPAIRMEN (GRP200). Working primarily on engine accessory systems or components (as opposed to such basic engine parts as compressors or turbines), these 25 airmen perform tasks such as:

- inspecting fuel manifold nozzles
- performing operational checks of fuel manifolds
- maintaining fuel manifold test stands
- inspecting engine bearings
- pressure checking engine carbon seals

Only slightly more experienced than the afterburner personnel discussed above (an average of 31 months in the career field and 33 months in the service), these airmen, too, perform a very limited job with an average of only 25 tasks (16 tasks require over 50 percent of their relative job time).

X. SMALL GAS TURBINE MECHANICS (GRP176). Including both 426X2 (72 percent) and 426X3 (28 percent) personnel, these airmen concentrate their maintenance efforts on small gas turbine engines such as GTC-85-397, GTC-85-71/71A, and GTC-85-70/70A. Sixty-five percent of their relative job time is devoted to these specialized maintenance functions and the administrative procedures involved. With an average of 35 tasks performed, over 50 percent of their relative work time is spent on only 18 tasks. Typical tasks include:

- adjusting small gas turbines (SGT)
- assembling or disassembling SGTs
- removing or installing impeller shafts
- analyzing SGT engine operation data during test stand runs
- operating SGT engines on test stands

#### Management Staff Functional Area

XI. HEADQUARTERS STAFF PERSONNEL (GRP450). Working primarily at the major air command, numbered Air Force, or wing level, these incumbents perform mostly non-supervisory staff level coordination and evaluation functions. Typical tasks are:

- writing staff studies, surveys, or special reports
- planning briefings
- evaluating reports of deficiencies
- evaluating suggestions
- coordinating supply activities with supply or engine managers

The most senior group in the survey sample, these 24 NCOs average 198 months in the career field and 219 months in the service. With 63 percent holding the 9-skill level DAFSC and 37 percent the 7-skill level DAFSC (29 percent 42672 and eight percent 42673), the group has the highest average grade (7.3) of any group identified.

XII. PROPULSION BRANCH MANAGEMENT PERSONNEL CLUSTER (GRP112). This cluster of 342 airmen represents eight percent of the survey sample. Fifty-six percent of the group hold the 7-skill level DAFSC (48 percent 42672 and eight percent 42673), with 36 percent reporting performance at the 9-skill level. Averaging over 14 years in the career field (second highest experience factor of all the groups identified), 91 percent report supervising an average of 7.7 personnel, with 89 percent of their duty time devoted to supervision, management, training, administrative, and quality control functions. Representative tasks of the average 69 tasks performed by the group included:

- interpreting policies, directives, or procedures for subordinates
- establishing and evaluating compliance with performance standards
- preparing or indorsing APRs
- supervising Jet Engine Mechanics or Technicians (AFSCs 42652 or 42672)
- determining OJT training requirements

Within this cluster were two job types, with the larger group (General Supervisory Personnel) comprised of personnel performing the overall supervisory and management functions, while the smaller group of airmen (OJT Program Monitors) concentrated on the operation of the OJT program.

XIII. QUALITY CONTROL TECHNICIANS (GRP320). This independent job type group was differentiated by the predominance of inspection, evaluation, and review tasks performed. Performing an average of 39 tasks, 50 percent of their relative job time was spent on only 19 tasks, with 13 specifically associated with inspecting, evaluating, or the review process. Typical tasks included:

- performing activity inspections
- reviewing unsatisfactory reports (UR)
- performing quality visual inspections (QVI) of engines
- evaluating reports of deficiencies
- performing special modification inspections

These highly experienced airmen average 13 years in the career field, with 80 percent of the 61 members reporting 7-skill level DAFSCs and eight percent indicating they hold DAFSC 42699.

XIV. QEC KIT MONITORS (GRP329). Although these 17 airmen indicated they work in a shop environment (53 percent report overseas assignment), the majority (52 percent) of their relative job time is spent performing duties and tasks pertaining to administrative and supervisory or managerial functions. Of the average 42 tasks performed, those tasks dealing with QEC kit tracking and inspection consume the most relative time. Representative tasks for this group of predominantly 5-skill level airmen (59 percent DAFSC 42652 and 18 percent 42653) are:

- inspecting QEC kits
- maintaining QEC kit historical records
- making entries on Supply Issue/Turn-In Report Forms (AF Form 2005)
- making entries on Reparable Item Processing Tag Forms (AFTO Form 350)
- inspecting QEC kit forms
- preparing QEC kits for storage

#### Supply, Administration, and Training Functional Area

XV. SUPPLY SUPPORT PERSONNEL CLUSTER (GRP042). Comprised of two distinct job groups (Materiel-AGE Support Personnel and Tool Crib Personnel) and representing six percent of the total survey sample, this cluster of 204 airmen also includes subgroups which handle non-powered AGE and due-in-from-maintenance (DIFM) responsibilities. Forty-six percent of the groups member's relative job time is spent on tasks relating to preparation and maintenance of forms, records, and reports. Tasks representative of the job performed by this group included:

- making entries on Supply Issue/Turn-In Request Forms (AF Form 2005)
- inventorying equipment, tools, or supplies
- making entries on Unserviceable (Condemned) Tag or Label Forms (DD Form 1577 or DD Form 1577-1)
- coordinating calibration of test equipment with the Precision Measurement Equipment Laboratory (PMEL)
- maintaining bench stock listings
- maintaining tool cribs

Comprised of both 426X2 (77 percent) and 426X3 (23 percent) personnel, these experienced airmen average over five years in the career field with 97 percent reporting a 5-skill level DAFSC.

XVI. TECHNICAL ORDER MONITORS (GRP346). Each of the 14 airmen in this small independent job type indicates responsibility for maintenance of technical order publication files. While they are also involved with other types of publications, the technical orders are the common thread which brings this group together. With 92 percent of these airmen holding the 5- or 7-skill level DAFSC (50 percent and 42 percent respectively), this combination of 426X2 and 426X3 personnel performs a very limited and specialized job, averaging only 11 tasks, with essentially no engine or equipment maintenance responsibilities. Dominant tasks performed by group members included:

- maintaining technical order publication files
- reviewing changes in technical orders (TOs)
- establishing publications libraries
- maintaining TO or standard publications reading files

XVII. ENGINE RECORDS MAINTENANCE PERSONNEL (GRP202). These very experienced airmen (averaging over eight years in the career field with an average grade of 4.9) are predominantly 426X2 personnel (93 percent). Performing a limited job almost totally administrative and managerial in nature (encompassing 71 percent of their relative job time), personnel of this 14 member group reported job titles such as Engine Manager, Engine Analysis Specialist, and Reports and Records Specialists. Typical tasks for these incumbents include:

- preparing status reports
- maintaining engine locations or status files
- maintaining turbine wheel records
- directing preparation or maintenance of records or reports

XVIII. FORMAL TRAINING PERSONNEL (GRP054). Including both 426X2 and 426X3 personnel, the majority of this independent job type of 64 airmen are instructors assigned to the technical training center or various field training detachments (FTD). With over eight years in the career field (average grade is 5.1), these airmen spend the majority of their job time performing tasks directly associated with the training function. Typical tasks are:

- administering tests
- counseling trainees on training progress
- scoring tests
- conducting resident course classroom training
- evaluating progress of resident course students

#### Comparison of Specialty Groups

In addition to reviewing the functions of each job, it is also useful to compare the job groups in terms of background characteristics and job attitudes. Table 7 presents career ladder job group data pertaining to job satisfaction indicators such as expressed job interest, perceived utilization of talents and training, as well as reenlistment intentions.

In most of the groups identified, members indicate that the jobs performed are interesting, with 10 of the 18 groups showing 70 percent to over 90 percent of the members responding positively. Review of the composition of the jobs of those groups where less than 70 percent of the incumbents reported positive job interest reveals a trend of jobs which are very limited in scope (i.e., AFTERBURNER MECHANICS or SMALL GAS TURBINE MECHANICS - see data in Table 6) or which are not engine maintenance oriented jobs (such as SUPPLY SUPPORT PERSONNEL or TECHNICAL ORDER MONITORS).

Perceived utilization of talents was very high for the job groups overall, with only three (also part of eight groups discussed above) having less than 70 percent of the members responding positively (see highlighted figures in Table 7).

Utilization of training was also rated very high overall, with only six job groups reflecting less than 70 percent of the group members reporting positive perceptions of utilization of training received. It should be noted that each of these six groups is also among the eight discussed above where less than 70 percent of the airmen found their jobs interesting (see Table 7).

Expressed reenlistment intent for the 18 job groups was unusually high, with all but three groups (again these three groups are among the eight reporting lower job interest) reflecting positive intent by over 50 percent of the group's airmen.

Overall, job satisfaction for the groups identified in the career ladder structure analysis was very high, with positive indications from the majority of the groups. Those groups discussed above reflecting lower satisfaction indicators are composed of small numbers of people (the only exception being the SUPPLY SUPPORT PERSONNEL group with 204 members) and actually represent only 13 percent of the 2,981 airmen accounted for in the career ladder structure groups. As noted earlier, jobs with the lower satisfaction indicators are those which are very limited in scope or which take personnel away from the mechanical work for which they were selected and trained. While the number of personnel involved are relatively low, supervisors and career field managers should evaluate the necessity for these limited jobs and the utilization of trained and experienced maintenance personnel in non-maintenance functions such as supply support and administrative (non-managerial) support functions.

Review of the job inventory write-in comments from survey sample personnel supports the high job satisfaction indication for these two career ladders as displayed in the data in Table 7. When there are serious problems in a career field, survey respondents are usually generous with write-in comments to complain about problems as they perceive them. While 21 percent (748 airmen) of the survey sample used the write-in feature to convey information of some type (i.e., additional tasks performed, schools attended, or complaints/concerns), only six percent (representing just one percent of the total sample) could be categorized as complaints. Even within the six percent, no specific trends of complaints could be identified as potential problem areas.

TABLE 6  
SELECTED BACKGROUND DATA FOR CAREER LADDER CLUSTERS AND INDEPENDENT JOB TYPES

	AIRCRAFT SERVICING PERSONNEL	FLIGHTLINE TURBOPROP		FLIGHTLINE JET ENGINE		TEST CELL		IN-SHOP MAINTENANCE		PROPELLER SHOP		BALANCE SHOP		AFTER- BURNER		ENGINE ACCESSORY		SMALL GAS TURBINE	
		ENGINE PERSONNEL	MAINTENANCE PERSONNEL	ENGINE PERSONNEL	MAINTENANCE PERSONNEL	PERSONNEL	CELL PERSONNEL	ENGINE PERSONNEL	MAINTENANCE PERSONNEL	PERSONNEL	SHOP PERSONNEL	SHOP SPECIALISTS	PERSONNEL	MECHANICS	MECHANICS	REPAIRMEN	PERSONNEL	MECHANICS	PERSONNEL
NUMBER IN GROUP	51	342	699	152	842	46	27	22	25	35									
PERCENT OF TOTAL SAMPLE	1%	9%	19%	4%	23%	1%	1%	1%	1%	1%									
PERCENT IN CONUS	31%	66%	81%	75%	81%	59%	89%	73%	84%	83%									
DAFSC DISTRIBUTION:																			
42632	22%	*	8%	6%	15%	0%	15%	23%	20%	14%									
42652	37%	3%	57%	52%	57%	2%	78%	73%	72%	78%									
42672	20%	2%	27%	28%	14%	0%	4%	4%	4%	4%									
42633	0%	16%	1%	3%	5%	33%	3%	3%	4%	3%									
42653	17%	61%	5%	7%	8%	50%	0%	0%	0%	0%									
42673	4%	18%	2%	4%	1%	15%	0%	0%	0%	0%									
42699	0%	*	*	0%	0%	0%	0%	0%	0%	0%									
AVERAGE GRADE	4.2	4.0	4.3	4.5	3.7	3.6	3.6	3.2	3.4	3.8									
AVERAGE MONTHS IN CAREER FIELD	70	47	70	74	47	37	41	26	31	50									
AVERAGE MONTHS IN SERVICE	75	64	76	83	52	50	43	27	33	53									
PERCENT IN FIRST ENLISTMENT	43%	59%	48%	42%	69%	63%	85%	91%	88%	74%									
PERCENT SUPERVISING AVERAGE NUMBER TASKS PERFORMED	35%	46%	49%	53%	39%	37%	22%	27%	20%	27%									
	66	129	94	89	73	104	35	17	25	35									

\* DENOTES LESS THAN .5 PERCENT



TABLE 6 (CONTINUED)  
SELECTED BACKGROUND DATA FOR CAREER LADDER CLUSTERS AND INDEPENDENT JOB TYPES

	HEADQUARTERS		PROPULSION		QUALITY		SUPPORT		TECH		ENGINE		FORMAL	
	STAFF	PERSONNEL	MANAGEMENT	BRANCH	CONTROL	TECHNICIANS	PERSONNEL	MONITORS	ORDER	MONITORS	RECORDS	MAINTENANCE	TRAINING	PERSONNEL
NUMBER IN GROUP	24		342		61		204	17	14		14		64	
PERCENT OF TOTAL SAMPLE	1%		9%		2%		6%	.5%	.4%		.4%		2%	
PERCENT IN CONUS	83%		80%		84%		74%	47%	86%		79%		94%	
DAFSC DISTRIBUTION:														
42632	0%		1%		2%		6%	6%	0%		0%		1%	
42652	0%		10%		8%		52%	59%	21%		50%		41%	
42672	29%		48%		67%		19%	17%	36%		43%		36%	
42633	0%		0%		0%		3%	0%	7%		0%		0%	
42653	0%		2%		2%		15%	18%	29%		0%		11%	
42673	8%		9%		13%		5%	0%	7%		7%		11%	
42699	63%		30%		8%		0%	0%	0%		0%		0%	
AVERAGE GRADE	7.3		6.4		6.0		4.1	4.4	4.5		4.9		5.1	
AVERAGE MONTHS IN CAREER FIELD	198		173		156		69	71	97		102		99	
AVERAGE MONTHS IN SERVICE	219		191		166		78	73	107		120		119	
PERCENT IN FIRST ENLISTMENT	0%		7%		3%		51%	59%	57%		36%		16%	
PERCENT SUPERVISING	21%		91%		31%		40%	41%	21%		36%		36%	
AVERAGE NUMBER TASKS PERFORMED	21		69		39		18	42	11		23		19	

\* DENOTES LESS THAN .5 PERCENT

TABLE 7

COMPARISONS OF JOB SATISFACTION INDICATORS BY CAREER LADDER CLUSTERS AND INDEPENDENT JOB TYPES  
(PERCENT MEMBERS RESPONDING)\*

	AIRCRAFT SERVICING PERSONNEL		FLIGHTLINE TURBOPROP ENGINE MAINTENANCE PERSONNEL		FLIGHTLINE JET ENGINE MAINTENANCE PERSONNEL		TEST CELL PERSONNEL		IN-SHOP ENGINE MAINTENANCE PERSONNEL		PROPELLER SHOP MAINTENANCE PERSONNEL		BALANCE SHOP SPECIALISTS		AFTER- BURNER MECHANICS		ENGINE ACCESSORY REPAIRMEN		SMALL GAS TURBINE MECHANICS	
<u>EXPRESSED JOB INTEREST:</u>																				
DULL	10	10	5	1	8	6	7	23	8	6	7	23	8	6	37	6				
SO-SO	24	29	14	7	15	13	22	18	15	81	22	18	28	37	57	26				
INTERESTING	(65)	71	80	92	77	81	71	(59)	77				(64)							
<u>PERCEIVED UTILIZATION OF TALENTS:</u>																				
LITTLE OR NOT AT ALL	41	17	12	7	14	11	18	36	14	11	18	36	24	26						
FAIRLY WELL TO PERFECTLY	(59)	83	88	93	86	89	82	(64)	86	89	82	(64)	76	74						
<u>PERCEIVED UTILIZATION OF TRAINING:</u>																				
LITTLE OR NOT AT ALL	45	18	11	7	12	7	26	50	12	7	26	50	24	23						
FAIRLY WELL TO PERFECTLY	(55)	82	88	93	87	93	74	(50)	87	93	74	(50)	76	77						
<u>REENLISTMENT INTENTIONS:</u>																				
RETIRE	4	3	5	7	2	2	0	0	2	2	0	0	0	0						
NO, PROBABLY NO	33	41	37	30	43	30	41	59	43	30	41	59	40	37						
YES, PROBABLY YES	63	54	58	63	55	67	59	(41)	55	67	59	(41)	60	63						
ELIGIBLE TO REENLIST	92	96	96	97	96	96	89	100	96	96	89	100	100	91						
ELIGIBLE TO RETIRE	8	6	10	11	5	7	0	0	5	7	0	0	0	9						

\* COLUMNS MAY NOT ADD TO 100% DUE TO NON-RESPONSE OR ROUNDING

TABLE 7 (CONTINUED)  
COMPARISONS OF JOB SATISFACTION INDICATORS BY CAREER LADDER CLUSTERS AND INDEPENDENT JOB TYPES  
(PERCENT MEMBERS RESPONDING)\*

	HEADQUARTERS STAFF PERSONNEL		PROPULSION BRANCH MANAGEMENT PERSONNEL		QUALITY CONTROL TECHNICIANS		QEC KIT MONITORS		SUPPLY SUPPORT PERSONNEL		TECH ORDER MONITORS		ENGINE RECORDS MAINTENANCE PERSONNEL		FORMAL TRAINING PERSONNEL	
EXPRESSED JOB INTEREST:																
DULL	4		6		3		18		23		7		7		16	
SO-SO	0		13		7		18		20		36		29		6	
INTERESTING	92		80		89		(64)		(57)		(50)		(64)		77	
PERCEIVED UTILIZATION OF TALENTS:																
LITTLE OR NOT AT ALL	8		11		5		24		42		14		21		22	
FAIRLY WELL TO PERFECTLY	92		88		95		76		(58)		79		79		78	
PERCEIVED UTILIZATION OF TRAINING:																
LITTLE OR NOT AT ALL	8		14		7		41		51		29		50		28	
FAIRLY WELL TO PERFECTLY	92		85		93		(59)		(48)		(64)		(50)		72	
REENLISTMENT INTENTIONS:																
RETIRE	29		28		8		6		9		29		14		5	
NO, PROBABLY NO	13		15		8		29		40		43		14		19	
YES, PROBABLY YES	58		66		84		65		(49)		(38)		78		76	
ELIGIBLE TO REENLIST	83		90		92		100		90		93		93		98	
ELIGIBLE TO RETIRE	50		53		30		6		13		36		21		16	

\* COLUMNS MAY NOT ADD TO 100% DUE TO NON-RESPONSE OR ROUNDING

## SECTION II

### ANALYSIS OF 426X2 DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational analysis. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information is also used to evaluate how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS), reflect what career ladder personnel are actually doing in the field.

The distribution of 426X2 skill levels across the career ladder job groups is displayed in Table 8, while Table 9 displays the relative percent time spent on each duty across the skill level groups. As personnel progress upward through the skill levels, the amount of time spent performing supervisory, managerial, training, and administrative tasks (Duties A, B, C, D, and E) increases, with all except time spent in training and administrative areas peaking at the 9-skill level. Conversely, performance of duties involving the technical tasks pertaining to general and specific types of maintenance (i.e., flightline, in-shop, test cell, etc.) generally reflect decreases in relative time spent as the skill level increases. Specific skill level groups are discussed below.

#### Skill Level Descriptions

DAFSC 42632. Three-skill level personnel, representing 12 percent (323 members) of the 426X2 survey sample, performed an average of only 41 tasks. Members spent 81 percent of their time on technical duties involving general jet engine and small gas turbine engine maintenance in the shops, on the flightline, or at the test cells, with the largest percentage reporting that they work in the shops (see Table 17). This predominant shop utilization pattern of 3-skill levels was also evident in the career ladder jobs analysis display in Table 8. Performing tasks associated with record-keeping or reporting and quality control functions accounted for an additional 13 percent of their duty time. Typical general maintenance tasks performed included:

- removing or installing fuel or oil system components
- removing or installing starter system components
- cleaning engine parts
- sealing engine openings

Common tasks relating to shop or flightline oriented maintenance were:

- removing or installing engine bearings
- blending compressor or turbine blades
- removing or installing engines in aircraft

Table 10 presents additional representative tasks performed by this group. The low percentage of personnel in this skill level group performing common tasks (only six tasks were performed by 50 percent or more) suggests a

somewhat heterogeneous career ladder. This heterogeneity most likely results because 3-skill level airmen are disbursed across not only the Jet Engine Shop and Flightline functions (the two major work areas), but across a number of smaller more specialized functions as well (see Table 17). Additionally, they are also divided between Production Oriented Maintenance Organization (POMO) and non-POMO operational maintenance structures which has some limited effect on the composition of the jobs performed.

DAFSC 42652. The 1,492 personnel (57 percent of the 426X2 survey sample) at the 5-skill level perform a highly technical job with 87 percent of their duty time devoted to activities involving engine maintenance and the associated paperwork involved. Performing an average of 66 tasks, 33 percent of the group members report working in jet engine shops, with a nearly equal 29 percent performing primarily on the flightline (see Table 17). The career ladder job distribution displayed in Table 8 also reflects this same shop/flightline utilization pattern. While many of the tasks performed by 5-skill level airmen are the same as those of DAFSC 42632 members (see Table 11 for representative 5-skill level tasks), Table 9 displays the shift in time spent performing tasks involving supervisory, training, and administrative functions which help distinguish this group from the lower skill level personnel.

The tasks which most clearly differentiate between the 3- and 5-skill level airmen deal primarily with supervision and the more difficult aspects of the job which involve isolating malfunctions on various engine systems (see Table 12).

DAFSC 42672. Seven-skill level personnel, representing 31 percent (800 members) of the 426X2 survey sample, performed an average of 78 tasks, with 38 tasks accounting for over 50 percent of their job time. As can be seen in Table 8 and Table 17, 7-skill level members are not concentrated in obvious management or staff oriented job groups or work areas. With 75 percent reporting supervisory responsibilities, many are supervisory technicians performing a combination of supervisory and technical functions in the shop or flightline environments. Although supervision, management, and administrative type task performance is the dominant feature of the group, they still spend a significant amount of their total job time performing technical maintenance tasks (41 percent). Table 13 presents representative tasks for this group and reflects the range of the job, with 75 percent of the group preparing APRs, while 39 percent service engine oil systems.

Differences between the 5- and 7-skill level groups are reflected in the listing of tasks in Table 14. It is clear that, although the 7-skill level airmen still perform technical tasks, these group members obviously have the greater responsibility for supervision and management in the career ladder.

DAFSC 42699. As is typical of most career ladders, personnel at the 9-skill level reported performing primarily non-technical tasks. They performed an average of 65 tasks (as compared with an average of 78 for 7-skill levels) with 33 tasks accounting for over 50 percent of their job time. Group members spent 95 percent of their job time in supervisory, managerial, training, administrative, or quality control functions, with over 80 percent

identifying themselves as Branch Chiefs, Superintendents, Maintenance Supervisors, or NCOICs. Typical tasks performed by this DAFSC group are listed in Table 15.

Table 16 displays tasks which most clearly differentiate between 7- and 9-skill level personnel. Table 9 clearly displays the predominantly staff nature of these 9-skill level airmen's job and that 9-skill level personnel are the primary managers in this career ladder.

#### Summary

Career ladder progression is well defined, with personnel at the 3- and 5-skill level spending the vast majority of their job time performing technical tasks, while at the 7-skill level, supervisory and administrative type functions become the dominant characteristics of the job. Low numbers of tasks performed by 50 percent or more of the various skill level groups, along with the different operational environments in which they work, suggest a somewhat diverse or heterogeneous career ladder for these groups. Nine-skill level personnel performed a predominantly staff-type job with practically no technical maintenance tasks performed.

TABLE 8

DISTRIBUTION OF 426X2 DAFSC GROUP MEMBERS ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS RESPONDING)

JOB GROUPS (CLUSTERS AND INDEPENDENT JOB TYPES)	DAFSC 42632 (N=323)	DAFSC 42652 (N=1,492)	DAFSC 42672 (N=800)	DAFSC 42699 (N=138)
AIRCRAFT SERVICING PERSONNEL (N=51)	3	1	1	0
FLIGHTLINE TURBOPROP ENGINE MAINTENANCE PERSONNEL CLUSTER (N=342)	0	1	1	*
FLIGHTLINE JET ENGINE MAINTENANCE PERSONNEL CLUSTER (N=699)	17	27	24	*
TEST CELL PERSONNEL (N=152)	3	5	5	0
IN-SHOP ENGINE MAINTENANCE PERSONNEL CLUSTER (N=842)	39	32	15	0
PROPELLER SHOP MAINTENANCE PERSONNEL (N=46)	0	*	0	0
BALANCE SHOP SPECIALISTS (N=27)	1	1	*	0
AFTERBURNER MECHANICS (N=22)	2	1	*	0
ENGINE ACCESSORY REPAIRMEN (N=25)	2	1	*	0
SMALL GAS TURBINE MECHANICS (N=35)	2	1	*	0
HEADQUARTERS STAFF PERSONNEL (N=24)	0	0	1	11
PROPULSION BRANCH MANAGEMENT PERSONNEL CLUSTER (N=342)	1	2	21	75
QUALITY CONTROL TECHNICIANS (N=61)	*	*	5	5
QEC KIT MONITORS (N=17)	*	1	*	0
SUPPLY SUPPORT PERSONNEL CLUSTER (N=204)	4	7	5	0
TECHNICAL ORDER MONITORS (N=14)	0	*	1	0
ENGINE RECORDS MAINTENANCE PERSONNEL (N=14)	0	*	1	0
FORMAL TRAINING PERSONNEL (N=64)	*	2	3	0
PERCENT NOT GROUPED	26	18	17	9
TOTAL	100	100	100	100

\* DENOTES LESS THAN .5 PERCENT

TABLE 9

## AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY 426X2 DAFSC GROUPS

DUTIES	DAFSC	DAFSC	DAFSC	DAFSC
	42632 (N=323)	42652 (N=1,492)	42672 (N=800)	42699 (N=138)
A ORGANIZING AND PLANNING	2	4	10	23
B DIRECTING AND IMPLEMENTING	2	5	13	25
C INSPECTING AND EVALUATING	1	1	8	27
D TRAINING	1	3	8	6
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	9	12	13	7
F PERFORMING QUALITY CONTROL FUNCTIONS	4	5	7	7
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	9	9	7	1
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	21	14	7	*
I PERFORMING BALANCE SHOP FUNCTIONS	1	1	*	*
J PERFORMING TEST CELL FUNCTIONS	2	2	1	*
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	1	1	*	*
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	45	40	24	3
M PERFORM CROSS UTILIZATION TRAINING (CUT) DUTIES	2	3	2	1
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*
TOTAL	100	100	100	100

\* DENOTES LESS THAN .5 PERCENT



TABLE 10

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 42632 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	64
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	61
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	58
L343 PLACE PROTECTIVE COVERS ON ENGINES	52
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	51
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	50
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	49
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	49
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	48
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	47
L353 REMOVE OR INSTALL ANTI-ICING SYSTEM COMPONENTS	47
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	46
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	45
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	44
L360 REMOVE OR INSTALL EXHAUST GAS TEMPERATURE (EGT) SYSTEM COMPONENTS	44
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	43
L293 DRAIN FUEL FILTERS	42
H238 REMOVE OR INSTALL ENGINE BEARINGS	39
L357 REMOVE OR INSTALL ENGINE HYDRAULIC SYSTEM COMPONENTS	39
L393 SERVICE ENGINE OIL SYSTEMS	39
H243 REMOVE OR INSTALL QEC KITS	38
H199 BLEND COMPRESSOR OR TURBINE BLADES	37
L301 INSPECT ENGINE PLUMBING	37
H247 REMOVE OR INSTALL TURBINE ROTORS	36
H245 REMOVE OR INSTALL TURBINE NOZZLES	36
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	33

AVERAGE NUMBER OF TASKS PERFORMED - 51

TABLE 11

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 42652 PERSONNEL

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	71
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	64
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	64
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	60
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	60
L343 PLACE PROTECTIVE COVERS ON ENGINES	58
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	56
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	55
L301 INSPECT ENGINE PLUMBING	54
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	52
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	51
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	51
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	50
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	49
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	48
L297 INSPECT COMPRESSORS	48
L360 REMOVE OR INSTALL EXHAUST GAS TEMPERATURE (EGT) SYSTEM COMPONENTS	47
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	46
L393 SERVICE ENGINE OIL SYSTEMS	46
L299 INSPECT ENGINE EXHAUST CONES	45
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	44
L288 BLEND INLET BLADES	44
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	44
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	43
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	42

AVERAGE NUMBER OF TASKS PERFORMED - 66

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN 3-SKILL AND 5-SKILL LEVEL PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42632 (N=323)	DAFSC 42652 (N=1,492)	DIFFERENCE
B54 SUPERVISE APPRENTICE JET ENGINE MECHANICS (AFSC 42632)	7	36	-29
D89 CONDUCT OJT	6	33	-27
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	12	36	-24
L297 INSPECT COMPRESSORS	32	48	-16
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	18	34	-16
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	16	32	-16
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	37	52	-15
L315 ISOLATE MALFUNCTIONS IN ENGINE ANTI-ICING SYSTEMS	11	26	-15
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	18	33	-15
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	17	31	-14
L316 ISOLATE MALFUNCTIONS IN ENGINE BLEED AIR SYSTEMS	14	28	-14
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	14	28	-14
L318 ISOLATE MALFUNCTIONS IN ENGINE EXHAUST GAS TEMPERATURE (EGT) SYSTEMS	15	29	-14
L345 READ OR RECORD ENGINE OPERATION DATA	17	30	-13
F149 OBSERVE IN-PROCESS MAINTENANCE	9	22	-13
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	13	26	-13
G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	12	23	-11
G171 ISOLATE MALFUNCTIONS IN ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEMS	13	23	-10

AVERAGE NUMBER OF TASKS PERFORMED BY 42632 PERSONNEL - 51

AVERAGE NUMBER OF TASKS PERFORMED BY 42652 PERSONNEL - 66

TABLE 13

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 42672 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
C82 PREPARE APRs	75
B57 SUPERVISE JET ENGINE MECHANICS (AFSC 42652)	68
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	67
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	64
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	63
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	60
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	60
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	57
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	56
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	55
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	55
A9 DETERMINE WORK PRIORITIES	54
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	54
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	54
B54 SUPERVISE APPRENTICE JET ENGINE MECHANICS (AFSC 42632)	53
L301 INSPECT ENGINE PLUMBING	51
D92 COUNSEL TRAINEES ON TRAINING PROGRESS	50
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	49
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	49
D89 CONDUCT OJT	49
A6 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL OTHER THAN AFSC 426X2/426X3	48
L356 REMOVE OR INSTALL FUEL SYSTEM COMPONENTS	44
L393 SERVICE ENGINE OIL SYSTEMS	39
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	34
L286 ADJUST OPERATING AIRCRAFT ENGINES	31

AVERAGE NUMBER OF TASKS PERFORMED - 78

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN 5-SKILL AND 7-SKILL LEVEL PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42652 (N=1,492)	DAFSC 42672 (N=800)	DIFFERENCE
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	44	25	+19
H243 REMOVE OR INSTALL QEC KITS	33	16	+17
L354 REMOVE OR INSTALL ENGINE BLEED VALVE SEALS	39	22	+17
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	43	26	+17
L238 REMOVE OR INSTALL ENGINE BEARINGS	35	20	+15
L293 DRAIN FUEL FILTERS	42	28	+14
H247 REMOVE OR INSTALL TURBINE ROTORS	32	18	+14
H245 REMOVE OR INSTALL TURBINE NOZZLES	31	18	+13
H239 REMOVE OR INSTALL ENGINE INTERNAL OIL SEALS	30	17	+13
H225 REMOVE OR UNPACK ENGINES IN SHIPPING CONTAINERS	26	13	+13
C82 PREPARE APRs	21	75	-54
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	16	55	-39
B57 SUPERVISE JET ENGINE MECHANICS (AFSC 42652)	30	68	-38
A9 DETERMINE WORK PRIORITIES	24	54	-30
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	14	40	-26
B62 WRITE CORRESPONDENCE	6	31	-25
A11 DEVELOP WORK METHODS OR PROCEDURES	16	39	-23
A23 PREPARE STATUS REPORTS	8	28	-20
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	9	28	-19
E138 MAKE ENTRIES ON SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244)	10	24	-14

AVERAGE NUMBER OF TASKS PERFORMED BY 42652 PERSONNEL - 66

AVERAGE NUMBER OF TASKS PERFORMED BY 42672 PERSONNEL - 78

TABLE 15

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 42699 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
B62 WRITE CORRESPONDENCE	86
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	80
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	80
C80 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	79
C82 PREPARE APRs	79
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	78
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	76
B48 INTERVIEW NEWLY ASSIGNED PERSONNEL	75
C68 EVALUATE INSPECTION REPORTS OR PROCEDURES	75
A8 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	75
C63 ANALYZE WORKLOAD REQUIRMENTS	74
C74 EVALUATE REPORTS OF DEFICIENCIES	73
C65 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	73
A25 SCHEDULE LEAVES OR PASSES	72
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	71
A23 PREPARE STATUS REPORTS	70
C77 EVALUATE SUGGESTIONS	69
A9 DETERMINE WORK PRIORITIES	69
C70 EVALUATE MAINTENANCE MANAGEMENT INFORMATION AND CONTROL SYSTEMS (MMICS)	68
A11 DEVELOP WORK METHODS OR PROCEDURES	66
C67 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	66
C79 EVALUATE WORK SCHEDULES	65
A13 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	65
B58 SUPERVISE JET ENGINE TECHNICIANS (AFSC 42672)	63
A6 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL OTHER THAN AFSC 426X2/426X3	62

AVERAGE NUMBER OF TASKS PERFORMED - 65

TABLE 16

TASKS WHICH BEST DIFFERENTIATE BETWEEN 7-SKILL AND 9-SKILL LEVEL PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42672 (N=800)	DAFSC 42699 (N=138)	DIFFERENCE
L301 INSPECT ENGINE PLUMBING	51	10	+41
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	45	4	+41
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	49	11	+38
L393 SERVICE ENGINE OIL SYSTEMS	39	4	+35
B54 SUPERVISE APPRENTICE JET ENGINE MECHANICS (AFSC 42632)	53	20	+33
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	35	5	+30
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	36	7	+29
D89 CONDUCT OJT	49	21	+28
L394 SERVICE STARTER UNITS	30	4	+26
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	30	7	+23
B62 WRITE CORRESPONDENCE	31	86	-55
C74 EVALUATE REPORTS OF DEFICIENCIES	21	73	-52
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	28	80	-52
A13 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	16	65	-49
C68 EVALUATE INSPECTION REPORTS OR PROCEDURES	28	75	-47
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	24	71	-47
C63 ANALYZE WORKLOAD REQUIREMENTS	31	74	-43
C79 EVALUATE WORK SCHEDULES	23	65	-42
C64 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	5	46	-41
C67 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	29	66	-35

AVERAGE NUMBER OF TASKS PERFORMED BY 42672 PERSONNEL - 78

AVERAGE NUMBER OF TASKS PERFORMED BY 42699 PERSONNEL - 65

TABLE 17

DISTRIBUTION OF SKILL LEVEL GROUPS BY MAJOR WORK AREAS  
(PERCENT MEMBERS PERFORMING)

WORK AREA OF PRESENT JOB	DAFSC 42632 (N=323)	DAFSC 42652 (N=1,492)	DAFSC 42672 (N=800)	DAFSC 42699 (N=138)
JET ENGINE SHOP	42	33	21	12
FLIGHTLINE	26	29	27	7
TEST CELL	4	7	7	1
ACCESSORY REPAIR	5	5	3	1
PHASE DOCK	5	5	2	3
COMPONENT REPAIR	5	2	2	-
SMALL GAS TURBINE SHOP	3	2	3	-
AFTERBURNER SHOP	2	2	1	-
TRIM PAD	1	2	2	1
QUALITY CONTROL	-	*	5	1
SUPPLY AND TOOLS	1	4	5	1
AIRCRAFT GENERATION STAFF	1	1	1	3
FIELD MAINTENANCE STAFF	2	1	2	5
PROPULSION BRANCH STAFF	-	2	5	46
HIGHER HEADQUARTERS INSPECTION	-	-	-	3
HIGHER HEADQUARTERS STAFF	-	*	1	14

\* DENOTES LESS THAN .5 PERCENT



## ANALYSIS OF 426X2 AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFR 39-1 Specialty Descriptions for the Jet Engine Mechanic, Jet Engine Technician, and Aircraft Propulsion Superintendent, dated 31 October 1979. These descriptions are intended to furnish a broad overview of the duties and tasks performed in each skill level of the specialty.

The specialty descriptions for the Jet Engine Technician and Aircraft Propulsion Superintendent accurately reflect the combined technical and supervisory nature of the 7-skill level job and the staff and supervisory nature of the 9-skill level jobs. The 3/5-skill level description also accurately displays the technical nature of the job.

## ANALYSIS OF 426X2 TAFMS GROUPS

Utilization patterns for survey respondents in different Total Active Federal Military Service (TAFMS) groups were reviewed to determine if there were differences in tasks performed. As is generally true in most career ladders, as time in service increased, there was a corresponding increase in performance of duties involving supervisory, managerial, and training tasks (see Table 18). Time spent on tasks involving forms, records, reports, and quality control functions, however, did not change substantially between the first enlistment group and the group of personnel with over 20 years experience. Although time spent on technical tasks performed in the shop, on the flightline, and at the test cell decreased as supervisory responsibilities increased, it is notable that even in the fifth enlistment (193-240 months) and beyond, senior personnel were still involved in the performance of technical maintenance tasks (Duties G through P--see Table 18). These more experienced airmen were generally doing the more difficult tasks pertaining to system troubleshooting and operation of test cells.

### First-Enlistment Personnel

First-enlistment personnel (1-48 months) spent the vast majority of their job time performing engine maintenance tasks in the shop and on the flightline, with a greater proportion of that time spent on tasks peculiar to in-shop maintenance as opposed to flightline peculiar engine maintenance. Highly technical in nature, job duties involving maintenance and supporting administrative type tasks account for 90 percent of their relative work time. Typical tasks include removing or installing fuel or oil system components, inspecting engine plumbing, and blending inlet blades. Additional representative tasks performed by the group are listed in Table 19. Figure 2 displays the distribution of first-term members across career ladder jobs and shows that the highest percentage of these personnel are found in the IN-SHOP MAINTENANCE PERSONNEL CLUSTER. This distribution of less experienced airmen in shop jobs continues the trend identified in the DAFSC GROUP ANALYSIS.

Engines maintained by five percent or more of 426X2 first-enlistment personnel are listed in Table 20. Although the J-57 engine reflects the highest percentage of first-term airmen performing maintenance (20 percent), it should be noted that this figure has declined from 27 percent for Jet Engine Mechanics surveyed in 1972. Discussion with AFLC logistics management personnel and ATC training staff officers indicates that the projected reengining project for the KC-135 aircraft would eventually result in a further decline in airmen maintaining the J-57 engine, while projected additional procurement and delivery of F-15 and F-16 aircraft would increase the percentage of first-term airmen working with the F-100 engine. First-enlistment personnel also work with a variety of aerospace ground equipment (AGE), test equipment, and special tools. AGE used by five percent or more of this group is listed in Table 21, while Table 22 reflects test equipment or special tools used by five percent or more of 426X2 first-term airmen.

### Job Satisfaction Data

Table 23 presents data reflecting the job interest, perceived utilization of talents and training, and reenlistment intentions of selected TAFMS groups. Comparisons were also made between 426X2 TAFMS groups and comparative samples of other Mission Equipment Maintenance career ladders surveyed in 1980. These job satisfaction indicators are much higher across the board for 426X2 personnel than for the comparative sample. Jet engine maintenance personnel, according to these responses, are well satisfied with their jobs and the kinds of work that they do.

TABLE 18

## PERCENT TIME SPENT PERFORMING DUTIES BY 426X2 TAFMS GROUPS

DUTIES	MONTHS TAFMS					
	1-48 (N=1,359)	49-96 (N=413)	97-144 (N=292)	145-192 (N=299)	193-240 (N=210)	241+ (N=34)
A ORGANIZING AND PLANNING	3	5	6	10	14	14
B DIRECTING AND IMPLEMENTING	4	7	9	14	16	14
C INSPECTING AND EVALUATING	1	3	5	7	11	12
D TRAINING	2	6	7	8	8	7
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	11	11	13	14	14	13
F PERFORMING QUALITY CONTROL FUNCTIONS	4	5	6	7	6	7
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	9	10	9	7	5	6
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	17	10	9	7	6	4
I PERFORMING BALANCE SHOP FUNCTIONS	1	*	*	*	*	*
J PERFORMING TEST CELL FUNCTIONS	2	3	2	1	1	5
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	1	*	1	*	*	*
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	43	37	31	23	17	17
M PERFORM CROSS UTILIZATION TRAINING (CUT) DUTIES	2	3	2	2	2	1
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*	*	*
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*	*	*
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*	*	*
	100	100	100	100	100	100

\* INDICATES LESS THAN .5 PERCENT

TABLE 19

REPRESENTATIVE TASKS PERFORMED BY 426X2 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=1,359)
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	66
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	65
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	64
L343 PLACE PROTECTIVE COVERS ON ENGINES	58
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	56
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	56
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	53
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	53
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	52
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	50
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	50
L301 INSPECT ENGINE PLUMBING	49
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	49
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	47
L297 INSPECT COMPRESSORS	45
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	45
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	42
L288 BLEND INLET BLADES	41
H238 REMOVE OR INSTALL ENGINE BEARINGS	38
H243 REMOVE OR INSTALL QEC KITS	37
L346 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLIES	37
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	35
H247 REMOVE OR INSTALL TURBINE ROTORS	35
H237 REMOVE OR INSTALL COMPRESSORS	32
H194 APPLY PROTECTIVE COATINGS TO ENGINES OR ENGINE PARTS	31

AVERAGE NUMBER OF TASKS PERFORMED - 60

FIGURE 2

DISTRIBUTION OF 426X2 FIRST ENLISTMENT PERSONNEL  
ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS RESPONDING)

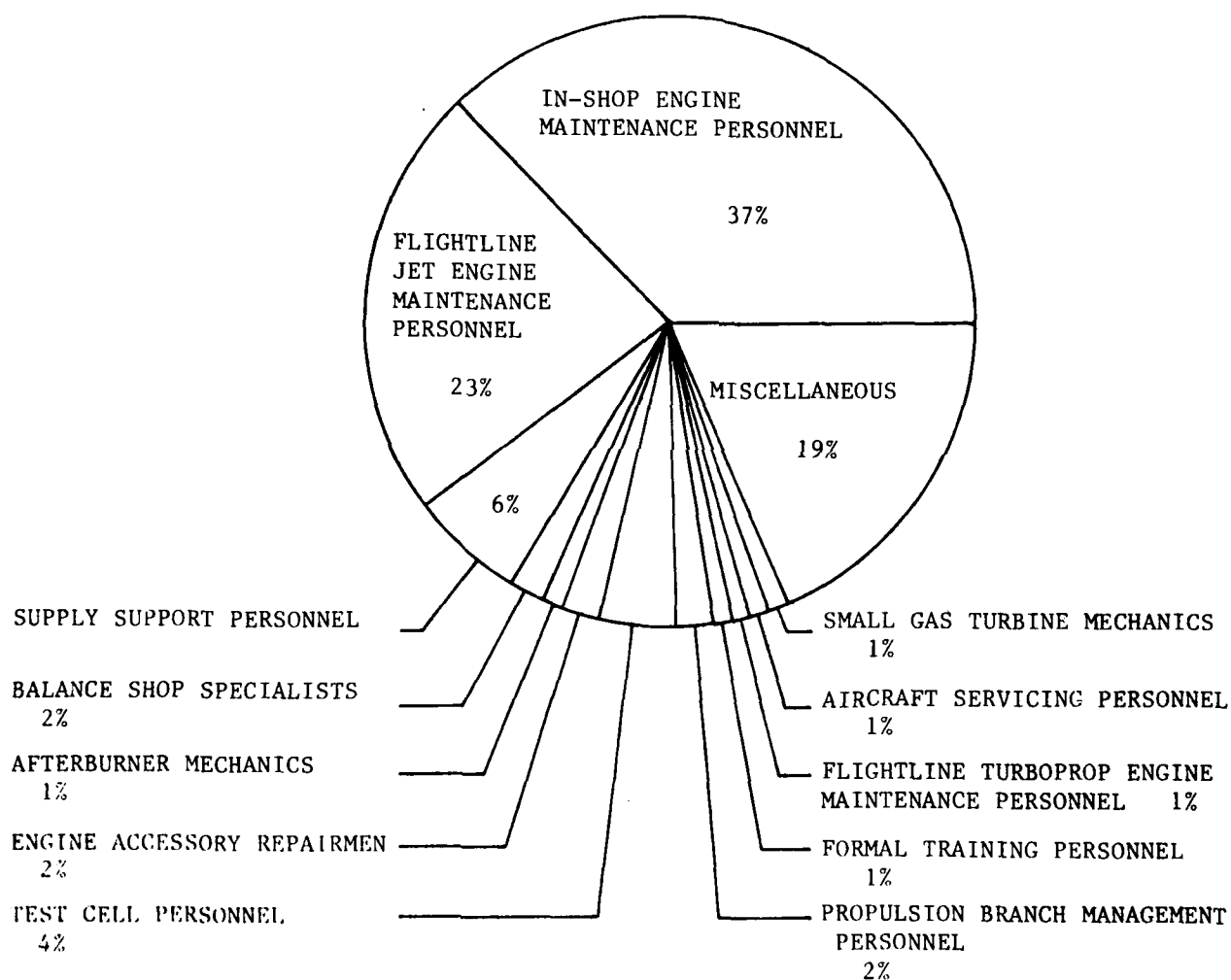


TABLE 20

JET, TURBOPROP, OR SMALL GAS TURBINES MAINTAINED  
BY FIVE PERCENT OR MORE OF 426X2 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

<u>JET, TURBOPROP, OR SMALL GAS TURBINES MAINTAINED</u>	<u>PERCENT FIRST ENLISTMENT MAINTAINING (N=1,359)</u>
J-57	20
J-79	18
TF-33	17
F-100	13
J-85	12
TF-30	8
TF-39	7
J-69	6
TF-34	5

TABLE 21

AEROSPACE GROUND EQUIPMENT (AGE) USED BY FIVE PERCENT OR MORE  
OF 426X2 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

AGE USED	PERCENT FIRST ENLISTMENT USING (N=1,359)
ENGINE TRANSPORTATION DOLLIES OR TRAILERS	60
ENGINE REMOVAL/INSTALLATION DOLLIES/TRAILERS	51
POWERED OVERHEAD HOISTS	42
PORTABLE HOISTS	35
AM 32A-60 GAS TURBINES	26
TRACTORS	25
FORK LIFTS	24
MA-1A GAS TURBINES	21
MD-3 GENERATORS	20
NF-2 LIGHTS	20
BT-400 GROUND HEATERS	14
AFTERBURNER TRANSPORTATION/MAINTENANCE TRAILERS	12
CLARK TUGS	12
COLEMAN TUGS	11
H-1 GROUND HEATERS	6



TABLE 22

TEST EQUIPMENT OR SPECIAL TOOLS USED BY FIVE PERCENT OR MORE  
OF 426X2 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

TEST EQUIPMENT OR SPECIAL TOOLS USED	PERCENT FIRST ENLISTMENT USING (N=1,359)
BORESCOPIES	52
DEPTH GAUGES	46
DIRECT PRESSURE GAUGES	34
MICROMETER CALIPERS	26
BEARING HEATERS	24
JET CAL TESTERS	24
FLIGHTLINE TROUBLESHOOTING TESTERS	21
AIRCRAFT ENGINE TEST STANDS	18
PORTABLE ENGINE TEST STANDS	15
VIBRATION ANALYZERS	14
BEARING CLEANERS	14
CARBON SEAL TESTERS	14
NOZZLE TESTERS	13
PORTABLE VIBRATION ANALYZERS	13
REMOTE TRIMMERS AND ADAPTERS	13
ENGINE MAX POWER ADJUSTING TEST SETS	12
BEARING DEMAGNETIZERS	11
ELECTRICAL COMPONENTS CHECKOUT TEST SETS	11
PORTABLE THERMOCOUPLE TESTERS	11
VARIABLE VANE PUMPS	11
INLET GUIDE VANE TESTERS	10
TRUE SURFACES	10
"YELLOW BOX" TESTERS	10
HYDRAULIC TORQUE WRENCHES	9
PRESSURE READOUT SETS	7
GTC ANALYZERS	6
TRAILER MOUNTED UNIVERSAL GAS TURBINE ENGINE TEST STANDS	6

TABLE 23

COMPARISON OF JOB SATISFACTION INDICATORS BY 426X2 TAFMS GROUPS  
(PERCENT MEMBERS RESPONDING)\*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	426X2 (N=1,359)	COMPARATIVE SAMPLE** (N=1,374)	426X2 (N=413)	COMPARATIVE SAMPLE** (N=853)	426X2 (N=835)	COMPARATIVE SAMPLE** (N=1,426)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	10	24	7	17	7	14
SO-SO	16	20	16	22	13	16
INTERESTING	74	56	76	61	79	70
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	19	37	16	31	13	24
FAIRLY WELL TO PERFECTLY	81	63	84	69	87	76
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	19	30	16	28	15	25
FAIRLY WELL TO PERFECTLY	81	69	84	71	85	74
<u>REENLISTMENT INTENTIONS:</u>						
NO, OR PROBABLY NO	56	66	32	51	25	31
YES, OR PROBABLY YES	43	33	68	48	75	69

\* MAY NOT TOTAL 100 PERCENT DUE TO NONRESPONSES

\*\* COMPARATIVE SAMPLE OF MISSION EQUIPMENT MAINTENANCE CAREER LADDERS SURVEYED IN 1980  
(INCLUDES AFSCs 302X0, 307X0, 308X0, 322X2A/B/C, AND 427X3)

## AFS 426X2 MAJCOM COMPARISONS

Tasks and background data for personnel of the eight major commands (MAJCOM) with the largest 426X2 populations were compared to determine whether job content varied as a function of MAJCOM assignment.

Generally, the largest percentages of duty time and 426X2 resources in each MAJCOM are committed to the performance of tasks involving general engine maintenance in the shops or on the flightline, along with completing the paperwork that goes with the maintenance action (see Table 24). Only AFSC varies noticeably from the other MAJCOMs in that much more of that command personnel's relative job time is spent on tasks involving in-shop activities than on flightline activities.

A review of the specific tasks performed in support of the engines maintained by the MAJCOMs (these engines vary by MAJCOM based on mission aircraft assigned--see Table 25) revealed no substantial differences in the overall jobs performed across the various commands. By and large, personnel perform essentially the same basic maintenance actions on each engine.

Although most of the tasks performed are common to all MAJCOMs, a few variations were noted. SAC personnel differ from other MAJCOM airmen in that they are much more involved with tasks pertaining to maintenance of water injection systems. ATC airmen and personnel assigned to the MAJCOMs performing tactical missions (TAC, USAFE, and PACAF) are distinguished from other commands by the performance of tasks relating to afterburner systems. MAC personnel, on the other hand, maintain thrust reverser systems while other MAJCOM groups reflect only limited involvement with that system. AFSC airmen differ slightly from other MAJCOM personnel since they are exposed to a wide range of aircraft and their powerplants as a result of their unique mission of test and evaluation.

### Summary

There were some minor variances in the jobs performed by personnel across the MAJCOM groups. These differences revolved around the unique systems found on engines of MAJCOM-specific aircraft. Even so, with the few exceptions noted above, the vast majority of 426X2 personnel perform a job that is very similar, with most airmen performing the same basic engine maintenance functions and maintaining similar engine accessory systems.

TABLE 24

## PERCENTAGE OF TIME SPENT ON DUTIES BY MAJCOM GROUPS

DUTIES	SAC (N=554)	MAC (N=436)	TAC (N=844)	USAF (N=267)	PACAF (N=97)	ATC (N=289)	AFSC (N=65)	AFLC (N=45)
A ORGANIZING AND PLANNING	5	6	6	6	5	5	5	10
B DIRECTING AND IMPLEMENTING	7	7	7	8	7	7	6	8
C INSPECTING AND EVALUATING	3	3	4	3	2	3	3	5
D TRAINING	4	4	4	3	3	10	2	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	13	11	12	13	11	10	8	3
F PERFORMING QUALITY CONTROL FUNCTIONS	5	4	5	5	5	5	5	5
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	8	9	8	9	10	8	11	2
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	13	11	12	11	14	14	14	25
I PERFORMING BALANCE SHOP FUNCTIONS	*	1	1	1	*	4	1	1
J PERFORMING TEST CELL FUNCTIONS	2	2	2	3	1	2	1	2
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	1	1	1	*	1	*	*	*
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	38	38	35	34	39	31	40	35
M PERFORM CROSS UTILIZATION TRAINING DUTIES	1	2	3	4	2	1	2	1
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*	*	*	1	*
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	*	*	*	*	*	*	*	*
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	1	*	*	*	*	1	*
TOTAL	100	100	100	100	100	100	100	100

\* DENOTES LESS THAN .5 PERCENT

TABLE 25

COMPARISON OF JET, TURBOPROP, OR SMALL GAS TURBINES (SGT)  
 MAINTAINED BY FIVE PERCENT OR MORE OF MAJCOM GROUPS  
 (PERCENT MEMBERS PERFORMING)

<u>JET, TURBOPROP, OR SGT MAINTAINED</u>	<u>SAC (N=554)</u>	<u>MAC (N=436)</u>	<u>TAC (N=844)</u>	<u>USAFE (N=267)</u>	<u>PACAF (N=97)</u>	<u>ATC (N=289)</u>	<u>AFSC (N=65)</u>	<u>AFLC (N=45)</u>
GTC-85-70/70A	6	7	-	-	-	-	8	-
GTC-85-71/71A	-	5	-	-	-	-	5	-
GTCP-85-106	-	17	-	-	-	-	8	-
GTCP-85-397	-	9	-	-	-	-	5	-
GTCP-165-1	-	9	-	-	-	-	-	-
JFS-190-1	-	-	-	-	-	-	11	-
F-100	-	-	25	17	33	-	46	18
J-33	-	-	5	-	7	-	-	7
J-57	76	-	5	8	5	-	45	36
J-60	5	14	-	-	9	-	12	-
J-69	-	-	-	-	-	44	-	-
J-75	-	-	10	-	-	-	-	27
J-79	-	-	25	29	47	-	60	36
J-85	-	-	5	5	9	62	46	-
T-53	-	-	-	-	-	-	11	-
T-56	-	6	-	-	9	-	12	-
T-400	-	-	-	-	-	-	9	-
TF-30	6	-	9	12	-	-	42	49
TF-33	24	58	-	-	7	-	20	42
TF-34	-	-	9	18	-	-	22	9
TF-39	-	32	-	-	-	-	-	-
TF-41	-	-	-	-	-	-	23	18

## ANALYSIS OF 42652 CONUS VERSUS OVERSEAS GROUPS

Comparisons were made of the tasks performed and background data for the 1,236 DAFSC 42652 personnel assigned to the Continental United States (CONUS) versus the 254 in the sample assigned to overseas locations. While CONUS personnel performed an average of 65 tasks, overseas personnel reported a slightly higher average of 68 tasks. Although there were some notable differences between the group's affiliation with certain engines (see Table 26), by and large the jobs performed by the two groups were essentially the same.

Comparisons of background data revealed that overseas personnel averaged slightly more time in the career field (49 months versus 43 months for CONUS) and more time in service (53 months TAFMS versus 46 months TAFMS for CONUS). While 73 percent of the CONUS personnel found their jobs interesting, only 66 percent of the overseas groups reported interesting jobs. Perceived utilization of talent and training was also higher for the CONUS group, with over 80 percent responding positively as compared to percentages in the mid-seventies for overseas members. Conversely, 53 percent of the overseas members indicated probable reenlistment, while only 49 percent of CONUS personnel reported intentions of remaining in the Air Force.

TABLE 26

COMPARISON OF JET, TURBOPROP, OR SMALL GAS TURBINES  
 MAINTAINED BY FIVE PERCENT OR MORE DAFSC 42652  
 CONUS AND OVERSEAS PERSONNEL  
 (PERCENT MEMBERS PERFORMING)

<u>JET, TURBOPROP, OR SMALL GAS TURBINES MAINTAINED</u>	<u>CONUS MEMBERS (N=1,236)</u>	<u>OVERSEAS MEMBERS (N=254)</u>
GTC-85-71/71A	2	5
GTCP-85-397	4	5
F-100	12	18
J-57	23	16
J-60	5	4
J-69	7	2
J-79	15	32
J-85	13	6
T-56	2	8
TF-30	7	6
TF-33	20	15
TF-34	5	11
TF-39	7	6

## AFS 426X2 TRAINING ANALYSIS

Occupational survey data are one of the many sources of information which can be used to assist in the development of a training program which is relevant to the needs of personnel working in their first assignment within a career ladder. Factors which may be used in evaluating training are the percent of first job (1-24 months TAFMS) or first enlistment (1-48 months TAFMS) members performing tasks, along with training emphasis and task difficulty ratings (previously explained in the SURVEY METHODOLOGY section). These factors were used in evaluating the Specialty Training Standard (STS) and the Plan of Instruction (POI) for the 426X2 career ladder. Technical school personnel from the Chanute Technical Training Center, Chanute AFB, Illinois, matched inventory tasks to appropriate sections of the STS and POI for course 3ABR42632. It was this matching upon which comparisons were based. A complete computer listing reflecting the percent members performing, training emphasis ratings, and task difficulty ratings for each task statement, along with STS and POI matching, has been forwarded to the technical school for their use in any further detailed review of training documents. A summary of that information is described below.

### Training Emphasis

Table 27 lists the top 20 tasks which raters indicated as requiring the highest training emphasis (TE). While the percentages of first-enlistment personnel performing these tasks are not high (only four tasks are performed by 50 percent or above), only seven tasks have less than 30 percent of the sample group performing them. This suggests that these tasks, on the whole, are deserving of some form of common structured training.

Further review of Table 27 reflects that 13 of the 20 tasks were matched to the 3ABR42632 POI, indicating that they are currently taught in the technical school. Of the seven tasks not matched to the POI, six have less than 30 percent of the first-term group doing them, and three are rated below average in difficulty. These same seven tasks are predominantly flightline oriented tasks and, as discussed in previous sections of this report, are generally performed by more senior airmen. This tends to support their omission from the resident training course.

### Specialty Training Standard (STS)

A comprehensive review of STS 426X2, dated October 1979, compared STS items to survey data. STS paragraphs containing general information or subject matter knowledge requirements were not evaluated. Overall, the STS provides comprehensive coverage of the job performed by personnel in the field, with survey data supporting significant STS paragraphs or subparagraphs. While some tasks did not have high percentages of personnel performing them, high training emphasis ratings for those tasks or the fact that the tasks were part of a specialized job being performed in the career ladder supports the retention of STS elements involving those tasks. Computer printouts reflecting the match between STS items and survey sample data have been furnished to the technical school for additional review.



### Plan of Instruction (POI)

Based on previously mentioned assistance from technical school subject matter specialists in matching inventory tasks to the 3ABR42632 POI, dated 20 April 1981, a computer product was generated displaying the results of that matching process. Information furnished for consideration includes training emphasis (TE) and task difficulty (TD) ratings as well as percent members performing data for first-job (1-24 months TAFMS) and first enlistment (1-48 months TAFMS) personnel.

Most POI blocks and units appear to be supported by survey data based on percentages of first-term personnel performing tasks or the high training emphasis ratings calculated for those tasks. There are some units, however, which merit discussion.

Block III, Engine Systems, allocates 11 hours to cover basic facts or operation of the thrust reverser system (Unit 3), water injection system (Unit 5), and afterburner system (Unit 6). A review of specific maintenance tasks which are applicable to these systems indicates that all matched tasks have less than 30 percent of the first-term airmen performing (see Table 28). Even though a few of the tasks have high TE ratings, which indicates that some form of structured training is desirable, the majority also reflect below average task difficulty ratings. This finding, along with the fact that each of the three systems is applicable only to certain engines, suggests that even if formal training is deemed necessary (regardless of the low percentage of personnel performing the tasks), FTD training may be more appropriate than resident course instruction.

Subject matter specialists and training personnel should further evaluate the subject areas discussed above in an effort to resolve the necessity for training and the most effective method to accomplish it. It is further suggested that those tasks throughout the POI which reflect below average task difficulty ratings and just meet the 30 percent member performing criterion be reviewed by those specialists to determine if FTD training may be more appropriate than resident course instruction.

TABLE 27

TASKS RATED HIGHEST IN TRAINING EMPHASIS FOR 426X2 PERSONNEL

TASKS	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING	
			FIRST ENLISTMENT (N=1,359)	TOTAL SAMPLE 426X2 (N=2,615)
*G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	6.76	5.58	35	36
*H238 REMOVE OR INSTALL ENGINE BEARINGS	6.32	6.21	38	31
*H199 BLEND COMPRESSOR OR TURBINE BLADES	6.29	4.71	36	31
*F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	6.19	4.49	56	57
*E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	6.04	4.04	56	60
*E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	6.03	4.21	31	36
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	6.03	4.18	27	29
*E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	6.02	4.00	66	68
L288 BLEND INLET BLADES	6.00	4.79	41	41
G159 ALIGN INSTALLED ENGINES	5.98	4.81	21	22
*G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	5.98	3.34	33	34
G160 ANALYZE ENGINE OPERATION DATA DURING TRIM PAD RUNS	5.94	6.29	18	23
*G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	5.89	4.70	26	30
*H239 REMOVE OR INSTALL ENGINE INTERNAL OIL SEALS	5.89	5.51	31	26
*H211 INSPECT TURBINE ROTORS	5.85	5.06	37	33
*H210 INSPECT TURBINE NOZZLES	5.82	4.91	37	32
L286 ADJUST OPERATING AIRCRAFT ENGINES	5.80	5.35	26	29
*L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	5.79	5.24	65	58
G179 PERFORM PHASE INSPECTIONS ON INSTALLED ENGINES	5.78	5.22	14	16
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	5.76	5.76	21	27

\* INDICATES TASKS MATCHED TO POI FOR 3ABR42632

TABLE 28

REPRESENTATIVE TASKS REFLECTING LOW FIRST ENLISTMENT PERFORMANCE ON SPECIFIC ENGINE SYSTEMS  
(LESS THAN 30 PERCENT PERFORMING)

ENGINE SYSTEMS	REPRESENTATIVE TASKS	TRAINING EMPHASIS*	TASK DIFFICULTY**	PERCENT MEMBERS PERFORMING	
				FIRST JOB (N=669)	FIRST ENLISTMENT (N=1,359)
THRUST REVERSER	L309 INSPECT THRUST REVERSER SYSTEM COMPONENTS	3.38	4.55	10	10
	L330 ISOLATE MALFUNCTIONS IN ENGINE THRUST REVERSER SYSTEMS	3.34	5.98	5	7
	L337 REMOVE OR INSTALL THRUST REVERSER SYSTEM COMPONENTS	3.43	4.65	13	13
	L389 RIG THRUST REVERSER SYSTEMS	3.56	5.75	9	9
WATER INJECTION	L384 REMOVE OR INSTALL WATER INJECTION SYSTEM COMPONENTS	3.69	4.57	13	14
	G170 ISOLATE MALFUNCTIONS IN ENGINE WATER INJECTION SYSTEMS	4.29	6.33	6	8
AFTER- BURNER	H195 ASSEMBLE OR DISASSEMBLE AFTERBURNERS	4.61	4.79	13	12
	H224 PACK OR UNPACK AFTERBURNERS IN SHIPPING CONTAINERS	3.30	3.06	6	6
	H234 REMOVE OR INSTALL AFTERBURNERS	4.88	4.30	24	22
	L285 ADJUST AFTERBURNER NOZZLES	4.29	5.05	21	20
	L294 INSPECT AFTERBURNERS	4.45	4.46	24	27
	L314 ISOLATE MALFUNCTIONS IN ENGINE AFTERBURNER SYSTEMS	4.21	6.27	11	16
	L348 REMOVE OR INSTALL AFTERBURNER SYSTEM COMPONENTS	4.54	4.79	24	26
	L385 RIG AFTERBURNER SYSTEMS	4.77	5.63	27	28

\* TE RATING OF 4.24 OR BETTER IS HIGH

\*\* TD RATING OF 5.00 IS AVERAGE

## 426X2 FLIGHTLINE, SHOP, AND TEST CELL PERSONNEL FUNCTIONAL GROUPING ANALYSIS

At the inception of the data analysis phase of this study, comments from the Air Force Functional Manager for the 426X2 career ladder (HQ USAF/LEYM) indicated there was a general perception of three distinct maintenance jobs in the field--1) flightline; 2) shop; and 3) test cell--and, if so, could create problems in assignment and training. The CAREER LADDER STRUCTURE ANALYSIS groupings, with a clear breakdown of jobs along those same lines, supported the perception of three major distinct jobs.

The functional groupings discussed here are based on survey sample members' responses to a job inventory background question as to whether they performed or supervised maintenance at depot level (responses were too few for valid comparisons), on the flightline (POMO and non-POMO concept responses combined), in-shop (POMO and non-POMO concept responses combined), or at the test cell (POMO or non-POMO concept responses combined). With this particular grouping concept, personnel from the various flightline, shop, or test cell oriented groups identified in the CAREER LADDER STRUCTURE ANALYSIS are drawn together as one entity (i.e., most personnel in the IN-SHOP MAINTENANCE PERSONNEL, BALANCE SHOP SPECIALISTS, or AFTERBURNER MECHANICS groups would be included in the SHOP grouping).

Review of the technical tasks performed (see Table 29) and the average time spent on tasks in the specific duty areas relative to these groups (see Table 30) shows a clear distinction of jobs based on these specialized areas. Two of the three groups (Flightline and Test Cell) have a series of tasks pertaining to malfunction analysis which are performed by comparable numbers of personnel from both groups and which tend to set both apart from the Shop group. This review of specialization areas tends to support an argument in favor of some sort of compartmentalization of the career ladder along the lines of the functional groupings under discussion.

Referring back to Table 30, however, you can see that the duty area concerning general engine maintenance tasks (Duty L) accounts for the single largest amount of each group's relative job time, and the percentages of time are very similar. While there are those tasks peculiar to the three functional groups, Table 31 displays representative examples of tasks performed by similar percentages of airmen from all three groups. Thus, there is a core of common technical tasks which indicates a job commonality not evident at first look.

Evaluation of background data pertaining to these three groups gives additional insight into the career ladder (see Table 32). Flightline and Test Cell group personnel are comparable in experience (average months in career field and service), scope of the job performed (average number of tasks performed), and average grade. Conversely, the Shop personnel reflect lower grades, approximately one year less experience, and a much higher percentage of the group are in their first enlistment.

These data suggest that while there are, indeed, differences in the jobs performed by the three groups, these differences are likely a function of experience and tend to diminish over time. What we may be seeing is a process where new airmen recently out of technical training tend to be assigned initially to the shop environment where they are placed on OJT, and work on the buildup and teardown of the major jet engine components and engine accessories. Once they have completed the local FTD training appropriate to the engine they will maintain, and have completed a set period of service in the shop, they are then ready to be considered for flightline or test cell duty.

This shop exposure helps to familiarize airmen with the location of the various engine components and engine terminology with which they'll be working. This becomes a very valuable addition to their skills and knowledge when they move to the flightline where they have responsibility for debriefing flight crews and performing the series of tasks dealing with isolating malfunctions which are peculiar to the Flightline and Test Cell groups.

Discussions with field supervisors across the major commands confirms that this added knowledge is extremely helpful on the flightline. Thus, the knowledge of engines and accessory systems components, gained by the less-experienced shop-group airmen through performance of tasks common to all three groups (see Table 31), becomes a building block which helps them to move to the broader jobs performed by the Flightline and Test Cell groups. This flow appears to produce a mechanic who can be effective much more quickly in the new environment, and should not be disturbed by impediments such as career ladder shreds by functional breakdown.

An evaluation of the job satisfaction indicators in Table 32 lends additional credence to the status quo. While Test Cell personnel report extremely high job satisfaction, the responses by Flightline and Shop personnel groups are very high, and, significantly, comparable. All of these indicators tend to point to a career ladder whose members are, on the whole, very happy in what they are doing and in the way their talents and training are being used; and, that the current classification system and training system (resident training, FTD courses, and OJT) are working to the benefit of the individual airmen and the US Air Force as a whole.

TABLE 29

EXAMPLES OF TECHNICAL TASKS WHICH BEST DIFFERENTIATE BETWEEN 426X2  
FLIGHTLINE, SHOP, AND TEST CELL PERSONNEL FUNCTIONAL GROUPS  
(AT LEAST 20 PERCENT PERFORMING)

TASKS	PERCENT MEMBERS PERFORMING			
	FLIGHT- LINE (N=868)	SHOP (N=1,062)	TEST CELL (N=179)	TASK DIFF TNG EMP
G159 ALIGN INSTALLED ENGINES	54	5	6	4.81 5.98
G164 DEBRIEF FLIGHT CREWS OR GROUND CREWS TO DETERMINE ENGINE MALFUNCTIONS	51	2	5	5.81 3.69
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	68	7	17	4.70 5.89
G169 ISOLATE MALFUNCTIONS IN ENGINE PRESSURE RATIO (EPR) SYSTEMS	34	3	22	6.07 4.65
G171 ISOLATE MALFUNCTIONS IN ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEMS	56	4	11	5.52 5.52
G172 ISOLATE MALFUNCTIONS IN OVERSPEED SYSTEMS	31	3	15	6.05 4.35
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	64	4	14	5.76 5.76
G179 PERFORM PHASE INSPECTIONS ON INSTALLED ENGINES	35	4	3	5.22 5.78
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	79	7	12	3.34 5.98
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	68	6	6	4.18 6.03
G185 REMOVE OR INSTALL ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEM COMPONENTS	53	4	7	5.26 5.38
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	83	9	8	5.58 6.76
G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	50	4	11	5.42 5.32
M399 GROUND AIRCRAFT	41	3	6	2.10 4.08
M401 LAUNCH OR RECOVER AIRCRAFT	39	2	5	4.64 2.34
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	5	40	7	5.55 4.92
H201 INSPECT ENGINE BEARINGS	6	37	5	5.02 5.69
H203 INSPECT ENGINE OIL SEALS	15	51	13	4.38 5.49
H210 INSPECT TURBINE NOZZLES	16	56	12	4.91 5.82
H229 PREPARE ENGINES FOR SHIPMENT	10	54	16	3.99 4.76
H234 REMOVE OR INSTALL AFTERBURNERS	4	33	6	4.30 4.88
H236 REMOVE OR INSTALL COMPRESSOR BLADES	5	32	5	5.43 4.84
H237 REMOVE OR INSTALL COMPRESSORS	5	50	7	6.51 5.69
H238 REMOVE OR INSTALL ENGINE BEARINGS	8	59	9	6.21 6.32
H239 REMOVE OR INSTALL ENGINE INTERNAL OIL SEALS	7	49	10	5.51 5.89
H245 REMOVE OR INSTALL TURBINE NOZZLES	6	54	8	5.21 5.33
H247 REMOVE OR INSTALL TURBINE ROTORS	5	56	8	5.55 5.56

TABLE 29 (CONTINUED)

EXAMPLES OF TECHNICAL TASKS WHICH BEST DIFFERENTIATE BETWEEN 426X2  
FLIGHTLINE, SHOP, AND TEST CELL PERSONNEL FUNCTIONAL GROUPS  
(AT LEAST 20 PERCENT PERFORMING)

TASKS	PERCENT MEMBERS PERFORMING				
	FLIGHT- LINE (N=868)	SHOP (N=1,062)	TEST CELL (N=179)	TASK DIFF	TNG EMP
J262 ANALYZE ENGINE OPERATION DATA DURING TEST CELL RUNS	4	4	86	6.45	4.76
J265 CARBOBLAST OR WET BLAST ENGINE COMPRESSORS	3	1	40	5.30	3.86
J266 COMPUTE ENGINE THRUST OR EFFICIENCY ON TEST CELLS	3	2	69	5.90	4.65
J267 INSPECT ENGINES BEFORE OR AFTER INSTALLATION IN TEST CELLS	4	9	89	5.02	5.04
J268 INSPECT FLEXURE PLATES OR RESTRAINT ASSEMBLIES ON TEST CELLS	3	2	77	5.06	4.40
J271 INSTALL TEST CELL ADAPTER KITS	3	5	75	4.97	4.60
J272 MAINTAIN TEST CELLS	3	3	86	6.01	4.82
J273 OPERATE ENGINES IN TEST CELLS	3	3	82	6.24	5.22
J274 PRESERVE OR DEPRESERVE ENGINE FUEL SYSTEMS	5	6	86	4.43	4.84
J275 REMOVE OR INSTALL ENGINES FROM TEST CELLS	5	11	92	4.39	5.44
L311 INSPECT VIBRATION ANALYZERS	11	2	53	4.96	3.30
L383 REMOVE OR INSTALL VIBRATION SYSTEM COMPONENTS	13	7	50	4.32	3.68
L286 ADJUST OPERATING AIRCRAFT ENGINES	60	5	51	5.35	5.80
L315 ISOLATE MALFUNCTIONS IN ENGINE ANTI-ICING SYSTEMS	46	8	63	5.18	4.67
L316 ISOLATE MALFUNCTIONS IN ENGINE BLEED AIR SYSTEMS	49	9	58	5.35	4.71
L317 ISOLATE MALFUNCTIONS IN ENGINE CONSTANT SPEED DRIVE (CSD) SYSTEMS	43	6	42	5.62	4.03
L318 ISOLATE MALFUNCTIONS IN ENGINE EXHAUST GAS TEMPERATURE (EGT) SYSTEMS	51	10	68	5.94	4.92
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	59	11	65	6.41	5.23
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	61	10	67	5.44	5.11
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	61	12	65	5.75	5.12
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	50	6	61	5.13	4.42
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	61	8	57	4.95	4.82
L395 TAKE SPECTROMETRIC OIL ANALYSIS SAMPLES	38	13	73	2.30	5.02

TABLE 30  
COMPRISON OF AVERAGE PERCENT TIME SPENT ON  
DUTIES BY 426X2 FLIGHTLINE, SHOP, AND TEST CELL PERSONNEL  
FUNCTIONAL GROUPS

DUTIES	FLIGHT- LINE (N=868)	SHOP (N=1,062)	TEST CELL (N=179)
A ORGANIZING AND PLANNING	4	5	4
B DIRECTING AND IMPLEMENTING	6	7	7
C INSPECTING AND EVALUATING	2	3	2
D TRAINING	3	3	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	9	11	9
F PERFORMING QUALITY CONTROL FUNCTIONS	5	4	4
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	(19)	2	4
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	3	(24)	3
I PERFORMING BALANCE SHOP FUNCTIONS	*	2	*
J PERFORMING TEST CELL FUNCTIONS	*	1	(19)
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	*	1	1
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	(42)	(37)	(43)
M PERFORM CROSS UTILIZATION TRAINING (CUT) DUTIES	5	*	1
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	*	*	*
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	*	*	*
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	*	*
TOTAL	98**	100	100

\* DENOTES LESS THAN .5 PERCENT

\*\* DOES NOT TOTAL 100% DUE TO ROUNDING



TABLE 31

EXAMPLES OF TECHNICAL TASKS PERFORMED IN COMMON BY 426X2  
FLIGHTLINE, SHOP, AND TEST CELL PERSONNEL FUNCTIONAL GROUPS  
(AT LEAST 20 PERCENT PERFORMING)

TASKS	PERCENT MEMBERS PERFORMING				TNG EMP
	FLIGHT- LINE (N=868)	SHOP (N=1,062)	TEST CELL (N=179)	TASK DIFF	
L288 BLEND INLET BLADES	56	41	24	4.79	6.00
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	58	29	70	3.86	4.71
L297 INSPECT COMPRESSORS	51	51	45	4.87	5.71
L298 INSPECT ENGINE CONTROLS	48	28	39	4.74	5.07
L299 INSPECT ENGINE EXHAUST CONES	53	44	27	4.11	4.81
L301 INSPECT ENGINE PLUMBING	62	53	48	4.28	5.62
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	67	41	69	4.71	5.39
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	41	45	26	4.73	4.98
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	54	45	50	4.51	4.83
L350 REMOVE OR INSTALL CARTRIDGE-PNEUMATIC STARTER UNITS	42	32	34	4.13	4.64
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	57	41	41	4.98	4.78
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	54	48	61	4.15	4.77
L354 REMOVE OR INSTALL ENGINE BLEED VALVE SEALS	43	33	37	3.86	4.07
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	74	59	65	5.24	5.79
L357 REMOVE OR INSTALL ENGINE HYDRAULIC SYSTEM COMPONENTS	34	40	29	4.58	4.37
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	72	59	69	4.80	5.61
L359 REMOVE OR INSTALL ENGINE PRESSURE RATIO (EPR) SYSTEM COMPONENTS	33	33	36	4.35	4.39
L360 REMOVE OR INSTALL EXHAUST GAS TEMPERATURE (EGT) SYSTEM COMPONENTS	52	44	56	4.41	4.95
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	29	57	27	4.84	5.16
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	65	49	60	4.21	5.17
L372 REMOVE OR INSTALL RPM INDICATOR SYSTEM COMPONENTS	41	26	50	5.04	4.50
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	65	41	48	4.03	4.81
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	54	50	59	3.33	4.50
L385 RIG AFTERBURNER SYSTEMS	26	27	38	5.63	4.77
L387 RIG INLET GUIDE VANE (IGV) SYSTEMS	27	23	32	5.92	4.86
L393 SERVICE ENGINE OIL SYSTEMS	64	30	77	2.77	5.56
L394 SERVICE STARTER UNITS	55	28	51	2.82	5.16
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	67	48	69	3.00	5.17

TABLE 32

SELECTED BACKGROUND DATA FOR 426X2 FLIGHTLINE, SHOP,  
AND TEST CELL PERSONNEL FUNCTIONAL GROUPS

	FLIGHTLINE (N=868)	SHOP (N=1,062)	TEST CELL (N=179)
<u>GENERAL BACKGROUND INFORMATION:</u>			
PERCENT OF 426X2 TOTAL SAMPLE	33%	41%	7%
<u>DAFSC DISTRIBUTION:</u>			
42632	11%	17%	8%
42652	58%	60%	64%
42672	31%	23%	28%
AVERAGE GRADE	4.3	3.9	4.4
AVERAGE MONTHS IN CAREER FIELD	73	61	71
AVERAGE MONTHS IN SERVICE	78	65	76
PERCENT MEMBERS IN FIRST ENLISTMENT	49%	64%	46%
PERCENT MEMBERS IN FIRST JOB	21%	35%	22%
AVERAGE NUMBER OF TASKS PERFORMED	83	62	81
<u>JOB SATISFACTION INFORMATION:</u>			
(PERCENT MEMBERS RESPONDING)			
JOB FAIRLY INTERESTING OR BETTER	78%	74%	91%
TALENTS UTILIZED FAIRLY WELL OR BETTER	84%	85%	92%
TRAINING UTILIZED FAIRLY WELL OR BETTER	84%	85%	92%
FAVORABLY CONSIDERING REENLISTMENT	57%	55%	58%

## COMPARISON OF CURRENT 426X2 SURVEY TO PREVIOUS SURVEY

The results of this survey (426X2 personnel) were compared to those of Occupational Survey Report (OSR) AFPT 90-432-065 (then AFS 432X0), dated 1 December 1972. Comparisons were made to career ladder structures and to job satisfaction indicators for TAFMS groups.

Table 33 displays the comparison of the career ladder structure applicable to most 426X2 personnel in 1981 and that of the 1972 sample. Only one group found in 1972 could not be linked to some extent to 1981 groups. On the other hand, there were four 1981 groups which could not be matched to the 1972 sample and another group (SUPPLY SUPPORT PERSONNEL CLUSTER) that was much more significant (in terms of size) in 1981 than its corresponding 1972 group. The most notable of the new 1981 groups were the AIRCRAFT SERVICING SPECIALISTS which is comprised primarily of Tactical Air Forces personnel working under the POMO concept. The 1972 group which was not identified in 1981 was the ENGINE OIL ANALYSIS SPECIALISTS. According to personnel in the field, the responsibility for the oil analysis program was shifted to another career ladder, with 426X2 personnel only required to draw oil samples and forward them for analysis. With these few exceptions, it is quite clear that the Jet Engine Mechanic/Technician career ladder has changed very little over time and the high similarity of job groups identified in both samples reflect a very stable career ladder.

Review of the comparisons of job satisfaction indicators by TAFMS groups displayed in Table 34 indicates that, while positive perceptions of utilization of talents and training were essentially the same, job interest for the current study first-enlistment group (1-48 months) was much higher than the 1972 group, with a slight drop for the 1981 third-enlistment group (97-144 months). In view of the trend of the past few years toward low percentages of first-term airmen favorably considering reenlistment, it is encouraging to note the significant increase in the percentage of current study first-term personnel indicating possible reenlistment as compared to 1972 members.

TABLE 33

COMPARISONS OF CLUSTERS AND INDEPENDENT JOB TYPES WITH  
SIGNIFICANT 426X2 POPULATIONS IN 1981 SURVEY TO 1972 SURVEY

1981 SURVEY (N FOR 426X2 AND 42699=2,753)	NUMBER IN GROUP	1972 SURVEY (N=3,726)	NUMBER IN GROUP
AIRCRAFT SERVICING SPECIALISTS	40	NOT IDENTIFIED	-
FLIGHTLINE JET ENGINE MAINTENANCE PERSONNEL CLUSTER	643	FLIGHTLINE MAINTENANCE SPECIALISTS	572
TEST CELL PERSONNEL	131	TEST STAND SPECIALISTS	119
IN-SHOP ENGINE MAINTENANCE PERSONNEL CLUSTER	724	INTERMEDIATE MAINTENANCE SPECIALISTS	675
		ENGINE MINOR REPAIR SPECIALISTS	5
		ENGINE FINAL ASSEMBLY SPECIALISTS	5
		ENGINE TEAR DOWN SPECIALISTS	18
		Q.E.C. KIT INSTALLERS	18
BALANCE SHOP SPECIALISTS	26	BALANCE SHOP SPECIALISTS	11
AFTERBURNER MECHANICS	22	AFTERBURNER REPAIRMEN	28
ENGINE ACCESSORY REPAIRMEN	24	ENGINE ACCESSORY REPAIRMEN	12
SMALL GAS TURBINE MECHANICS	25	NOT IDENTIFIED	-
HEADQUARTERS STAFF PERSONNEL	22	NOT IDENTIFIED	-
PROPULSION BRANCH MANAGEMENT PERSONNEL CLUSTER	304	SUPERVISORS	186
QUALITY CONTROL TECHNICIANS	52	QUALITY CONTROL TECHNICIANS	15
QEC KIT MONITORS	14	NOT IDENTIFIED	-
SUPPLY SUPPORT PERSONNEL CLUSTER	157	SUPPLY FUNCTIONS SPECIALISTS	79
		ENGINE TRAILERS AND STANDS MAINTENANCE SPECIALISTS	5
TECHNICAL ORDER MONITORS	8	TECHNICAL ORDER MONITORS	5
ENGINE RECORDS MAINTENANCE PERSONNEL	13	RECORDS MAINTENANCE SPECIALISTS	5
FORMAL TRAINING PERSONNEL	50	INSTRUCTORS	45
NOT IDENTIFIED	-	ENGINE OIL ANALYSIS SPECIALISTS	18

TABLE 34

COMPARISON OF PREVIOUS SURVEY AND CURRENT SURVEY 426X2 TAFMS GROUPS  
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS*		49-96 MONTHS		97-144 MONTHS	
	1972 (N=1,970)	1981 (N=1,359)	1972 (N=545)	1981 (N=413)	1972 (N=300)	1981 (N=292)
<u>JOB SATISFACTION INFORMATION:</u>						
JOB FAIRLY INTERESTING OR BETTER	60	74	75	76	81	77
TALENTS AND TRAINING UTILIZED FAIRLY WELL OR BETTER**	80	-	85	-	91	-
TALENTS UTILIZED FAIRLY WELL OR BETTER	-	81	-	84	-	89
TRAINING UTILIZED FAIRLY WELL OR BETTER	-	81	-	84	-	86
FAVORABLY CONSIDERING REENLISTMENT	25	43	70	68	88	88

\* 5-48 MONTHS FOR 1972 GROUPS

\*\* THE TALENTS AND TRAINING QUESTIONS WERE COMBINED IN 1972 SURVEY

## SECTION III

### ANALYSIS OF 426X3 DAFSC GROUPS

As explained in Section II, data pertaining to DAFSC groups is important to the analysis of each career ladder. The distribution of 426X3 skill levels across career ladder job groups is displayed in Table 35, while Table 36 displays the relative percent time spent on each duty across the skill level groups. As personnel progress upward through the skill levels, the amount of time spent performing supervisory, managerial, training, and administrative tasks (Duties A, B, C, D, and E) increases, with all except time spent in training and administrative areas peaking at the 9-skill level. Conversely, performance of duties involving the technical tasks pertaining to general engine and in-shop engine and propeller maintenance generally reflect decreases in relative time spent as the skill level increases. Specific skill level groups are discussed below.

#### Skill Level Descriptions

DAFSC 42633. Three-skill level personnel, representing 22 percent (188 members) of the 426X3 survey sample, performed an average of only 68 tasks. Members spent 62 percent of their time on technical duties involving general engine maintenance in the shops, on the flightline, or at the test cell. Maintaining propellers in the shops and on the flightline, occupied an additional 21 percent of their relative job time. Performing tasks associated with record keeping, forms, or reporting and quality control functions accounted for 13 percent of their duty time. Typical general engine and propeller maintenance tasks performed included:

- cleaning engine parts
- removing or installing engine fuel system components
- removing or installing spinner noses
- rigging propeller control linkages

Common tasks relating to shop or flightline oriented maintenance were:

- removing or installing engines in aircraft
- removing or installing QEC kits
- adjusting negative torque signal (NTS) systems

Table 37 presents additional representative tasks performed by this group. The low percentage of personnel in this skill level group performing common tasks (only 11 tasks were performed by 50 percent or more) suggests some diversity in the career ladder. Table 43 displays the variety of major work areas reported by group members, and offers some explanation for the low percentages of personnel performing common tasks.

DAFSC 42653. The 467 personnel (55 percent of the 426X3 survey sample) at the 5-skill level perform a highly technical job, with 82 percent of their duty time devoted to activities involving engine and propeller maintenance and the associated paperwork involved. Performing an average of 96

tasks, 42 percent of the group members reported working on the flightline and 21 percent reported shop affiliation (see Table 43). Both Table 35 and Table 43 reflect the shift of the more experienced airmen from the shops to the flightline. While many tasks performed by 5-skill level airmen are the same as those of DAFSC 42633 members (see Table 38 for representative 5-skill level tasks), Table 36 displays the shift in time spent performing tasks involving supervisory, training, and administrative functions which helps distinguish this group from the lower skill level personnel.

The tasks which most clearly differentiate between the 3-skill and 5-skill level airmen deal primarily with supervision and the more difficult aspects of the job which involve malfunction analysis of propeller and engine systems (see Table 39). The higher average number of tasks performed by 5-skill level members (96 versus 68 for 3-skill level personnel) indicates a broader job than that of 3-skill level personnel. The somewhat diverse nature of the career ladder is again demonstrated by the fact that only 21 tasks are performed by 50 percent or more of this DAFSC group.

DAFSC 46273. Seven-skill level personnel, representing 23 percent of the 426X3 survey sample, performed an average of 105 tasks, with 103 tasks accounting for over 50 percent of their job time. Although the performance of tasks pertaining to supervision, management, training, quality control, and administration accounts for more of their job time, (73 percent reported having supervisory responsibilities), technical maintenance work is still a significant part of the total job. Table 40 presents representative tasks for the group and reflects the range of the job, with 72 percent of the group members preparing APRs, while 45 percent are still removing and installing engines on aircraft.

Differences between the 5- and 7-skill level groups are reflected in the listing of tasks in Table 41. It is clear that, while relatively high percentages of 7-skill level personnel still perform technical maintenance tasks, the 7-skill level group has the greater responsibility for supervision and management in the career ladder.

DAFSC 42699. This group was discussed in Section II along with the 426X2 DAFSC groups. Please refer to that discussion and Table 15 for information about this duty group.

Table 42 displays tasks which clearly differentiate between 7- and 9-skill level personnel. Table 36 clearly indicates the staff orientation of the 9-skill level airman's job and that 9-skill level personnel are the primary managers in the career ladder.

### Summary

Career ladder progression is clearly defined, with personnel at the 3- and 5-skill level spending the vast majority of their job time performing technical maintenance tasks, while at the 7-skill level, supervisory, managerial, administrative, and quality control function tasks accounted for much of the job time. Low numbers of tasks performed by 50 percent or more of the various skill level groups suggest a somewhat diverse career ladder. Nine-skill level personnel performed a predominantly staff-oriented job with very little activity involving technical maintenance task performance.

TABLE 35

DISTRIBUTION OF 426X3 DAFSC GROUP MEMBERS ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS RESPONDING)

JOB GROUPS (CLUSTERS AND INDEPENDENT JOB TYPES)	DAFSC 42633 (N=188)	DAFSC 42653 (N=467)	DAFSC 42673 (N=193)	DAFSC 42699 (N=138)
AIRCRAFT SERVICING PERSONNEL (N=51)	0	2	1	0
FLIGHTLINE TURBOPROP ENGINE MAINTENANCE PERSONNEL CLUSTER (N=342)	29	45	32	*
FLIGHTLINE JET ENGINE MAINTENANCE PERSONNEL CLUSTER (N=699)	4	7	7	*
TEST CELL PERSONNEL (N=152)	3	2	3	0
IN-SHOP ENGINE MAINTENANCE PERSONNEL CLUSTER (N=842)	22	14	4	0
PROPELLER SHOP MAINTENANCE PERSONNEL (N=46)	8	5	4	0
BALANCE SHOP SPECIALISTS (N=27)	*	0	0	0
AFTERBURNER MECHANICS (N=22)	0	0	0	0
ENGINE ACCESSORY REPAIRMEN (N=25)	1	0	0	0
SMALL GAS TURBINE MECHANICS (N=35)	1	1	1	0
HEADQUARTERS STAFF PERSONNEL (N=24)	0	0	1	11
PROPULSION BRANCH MANAGEMENT PERSONNEL CLUSTER (N=342)	0	1	16	75
QUALITY CONTROL TECHNICIANS (N=61)	0	0	4	5
QEC KIT MONITORS (N=17)	0	1	0	0
SUPPLY SUPPORT PERSONNEL CLUSTER (N=204)	3	7	5	0
TECHNICAL ORDER MONITORS (N=14)	1	1	1	0
ENGINE RECORDS MAINTENANCE PERSONNEL (N=14)	0	0	1	0
FORMAL TRAINING PERSONNEL (N=64)	0	1	4	0
PERCENT NOT GROUPED	28	13	16	9
TOTAL	100	100	100	100

\* DENOTES LESS THAN .5 PERCENT



TABLE 36

## AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY 426X3 DAFSC GROUPS

DUTIES	DAFSC 42633 (N=188)	DAFSC 42653 (N=467)	DAFSC 42673 (N=193)	DAFSC 42699 (N=138)
A ORGANIZING AND PLANNING	1	3	10	23
B DIRECTING AND IMPLEMENTING	3	5	11	25
C INSPECTING AND EVALUATING	1	2	7	27
D TRAINING	*	3	6	6
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	7	10	11	7
F PERFORMING QUALITY CONTROL FUNCTIONS	3	3	6	7
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	9	10	7	1
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	12	7	4	*
I PERFORMING BALANCE SHOP FUNCTIONS	*	*	*	*
J PERFORMING TEST CELL FUNCTIONS	2	1	1	*
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	1	1	*	*
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	39	31	19	3
M PERFORM CROSS UTILIZATION TRAINING DUTIES	1	2	2	1
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	3	4	3	*
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	6	5	3	*
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	12	13	10	*
TOTAL	100	100	100	100

\* DENOTES LESS THAN .5 PERCENT

TABLE 37

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 42633 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	66
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	62
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	62
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	60
L393 SERVICE ENGINE OIL SYSTEMS	60
L290 CLEAN ENGINES	55
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	54
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	53
L394 SERVICE STARTER UNITS	53
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	51
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	51
L293 DRAIN FUEL FILTERS	49
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	49
L343 PLACE PROTECTIVE COVERS ON ENGINES	47
L388 RIG PROPELLER CONTROL LINKAGES	47
L380 REMOVE OR INSTALL TURBINE INLET TEMPERATURE (TIT) SYSTEM COMPONENTS	47
L291 CLEAN FACILITIES	46
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	46
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	45
L289 CLEAN ENGINE PARTS USING CLEANERS OTHER THAN ULTRASONIC CLEANERS	45
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	45
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	44
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	43
P573 REMOVE OR INSTALL SPINNER NOSES	41
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	36

AVERAGE NUMBER OF TASKS PERFORMED - 68

TABLE 38

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 42653 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	75
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	66
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	66
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	64
L393 SERVICE ENGINE OIL SYSTEMS	64
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	62
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	61
L394 SERVICE STARTER UNITS	59
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	57
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	55
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	55
L388 RIG PROPELLER CONTROL LINKAGES	55
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	54
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	51
L301 INSPECT ENGINE PLUMBING	51
L378 REMOVE OR INSTALL TORQUE INDICATING SYSTEM PICKUPS	51
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	51
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	49
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	48
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	48
L297 INSPECT COMPRESSORS	45
L299 INSPECT ENGINE EXHAUST CONES	44
L329 ISOLATE MALFUNCTIONS IN ENGINE TEMPERATURE DATUM SYSTEMS	43
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	42
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	42

AVERAGE NUMBER OF TASKS PERFORMED - 96

TABLE 39

TASKS WHICH BEST DIFFERENTIATE BETWEEN 3-SKILL AND 5-SKILL LEVEL PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC	DAFSC	DIFFERENCE
	42633 (N=188)	42653 (N=467)	
D89 CONDUCT OJT	3	38	-35
C82 PREPARE APRs	1	23	-22
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	23	43	-20
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	23	42	-19
E131 MAKE ENTRIES ON OIL ANALYSIS REQUEST FORMS (DD FORM 2026)	19	38	-19
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	29	48	-19
N430 PERFORM OPERATIONAL CHECKS OF PERCENT OF REVOLUTIONS PER MINUTE (RPM)	13	32	-19
P551 REMOVE OR INSTALL AUXILIARY FEATHER MOTORS	9	27	-18
N425 PERFORM GROUND OPERATIONAL CHECKS OF NTS	19	36	-17
N429 PERFORM OPERATIONAL CHECKS OF FUEL GOVERNING	14	30	-16
P541 ISOLATE PROPELLER MALFUNCTIONS	16	32	-16
P545 PERFORM STATIC CHECKS OF BETA SCHEDULE	10	25	-15
L329 ISOLATE MALFUNCTIONS IN ENGINE TEMPERATURE DATUM SYSTEMS	29	43	-14
G164 DEBRIEF FLIGHT CREWS OR GROUND CREWS TO DETERMINE ENGINE MALFUNCTIONS	16	30	-14
P544 PERFORM OPERATIONAL CHECKS OF FEATHER	20	33	-13
L315 ISOLATE MALFUNCTIONS IN ENGINE ANTI-ICING SYSTEMS	22	34	-12
M401 LAUNCH OR RECOVER AIRCRAFT	12	24	-12
L331 ISOLATE MALFUNCTIONS IN ENGINE TORQUEMETER ASSEMBLY SYSTEMS	21	33	-12
G179 PERFORM PHASE INSPECTIONS ON INSTALLED ENGINES	20	31	-11

AVERAGE NUMBER OF TASKS PERFORMED BY 42633 PERSONNEL - 68

AVERAGE NUMBER OF TASKS PERFORMED BY 42653 PERSONNEL - 96

TABLE 40

## REPRESENTATIVE TASKS PERFORMED BY DAFSC 42673 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING
C82 PREPARE APRs	72
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	71
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	65
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	63
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	60
B60 SUPERVISE TURBOPROP PROPULSION MECHANICS (AFSC 42653)	60
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	59
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	58
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	57
A9 DETERMINE WORK PRIORITIES	55
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	53
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	51
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	51
L301 INSPECT ENGINE PLUMBING	50
F149 OBSERVE IN-PROCESS MAINTENANCE	49
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	49
B55 SUPERVISE APPRENTICE TURBOPROP PROPULSION MECHANICS (AFSC 42633)	48
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	47
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	47
L388 RIG PROPELLER CONTROL LINKAGES	47
C80 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	45
D89 CONDUCT OJT	45
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	45
L393 SERVICE ENGINE OIL SYSTEMS	45
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	42
P541 ISOLATE PROPELLER MALFUNCTIONS	38

AVERAGE NUMBER OF TASKS PERFORMED - 105

TABLE 41

TASKS WHICH BEST DIFFERENTIATE BETWEEN 5-SKILL AND 7-SKILL LEVEL PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42653 (N=467)	DAFSC 42673 (N=193)	DIFFERENCE
L394 SERVICE STARTER UNITS	59	35	+24
L290 CLEAN ENGINES	47	26	+21
L393 SERVICE ENGINE OIL SYSTEMS	64	45	+19
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	51	35	+16
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	57	41	+16
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	55	40	+15
L346 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLIES	30	16	+14
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	23	10	+13
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	42	31	+11
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	36	25	+11
C82 PREPARE APRs	23	72	-49
B60 SUPERVISE TURBOPROP PROPULSION MECHANICS (AFSC 42653)	26	60	-34
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	18	51	-33
A21 PLAN WORK ASSIGNMENTS	14	44	-30
D100 EVALUATE OJT TRAINEES	14	42	-28
F149 OBSERVE IN-PROCESS MAINTENANCE	22	49	-27
B62 WRITE CORRESPONDENCE	7	31	-24
C66 EVALUATE DUE IN FROM MAINTENANCE (DIFM) REPORTS	7	25	-18
E111 INITIATE WORK ORDER REQUESTS	14	30	-16
F148 MAKE IN-PROCESS MAINTENANCE CORRECTIVE SUGGESTIONS	10	25	-15

AVERAGE NUMBER OF TASKS PERFORMED BY 42653 PERSONNEL - 96

AVERAGE NUMBER OF TASKS PERFORMED BY 42673 PERSONNEL - 105

TABLE 42

TASKS WHICH BEST DIFFERENTIATE BETWEEN 7-SKILL AND 9-SKILL LEVEL PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42673 (N=193)	DAFSC 42699 (N=138)	DIFFERENCE
B60 SUPERVISE TURBOPROP PROPULSION MECHANICS (AFSC 42653)	60	9	+51
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	47	4	+43
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	45	7	+38
P541 ISOLATE PROPELLER MALFUNCTIONS	38	2	+36
L395 TAKE SPECTROMETRIC OIL ANALYSIS SAMPLES	39	4	+35
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	31	3	+28
L288 BLEND INLET BLADES	29	4	+25
D89 CONDUCT OJT	45	21	+24
L379 REMOVE OR INSTALL TORQUE METER ASSEMBLY COMPONENTS	25	1	+24
L345 READ OR RECORD ENGINE OPERATION DATA	30	9	+21
C74 EVALUATE REPORTS OF DEFICIENCIES	18	73	-55
A13 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	13	65	-52
C68 EVALUATE INSPECT REPORTS OR PROCEDURES	25	75	-50
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	32	80	-48
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	26	71	-45
A8 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT OR SUPPLIES	34	75	-41
B46 INITIATE PERSONNEL ACTION REQUESTS	14	52	-38
A25 SCHEDULE LEAVES OR PASSES	34	72	-38
A22 PREPARE JOB DESCRIPTIONS	18	51	-33
A12 DRAFT BUDGET OR FINANCIAL REQUIREMENTS	9	35	-26

AVERAGE NUMBER OF TASKS PERFORMED BY 42673 PERSONNEL - 105

AVERAGE NUMBER OF TASKS PERFORMED BY 42699 PERSONNEL - 65

TABLE 43

DISTRIBUTION OF SKILL LEVEL GROUPS BY MAJOR WORK AREAS  
(PERCENT MEMBERS PERFORMING)

<u>WORK AREAS OF PRESENT JOB</u>	<u>DAFSC 42633 (N=188)</u>	<u>DAFSC 42653 (N=467)</u>	<u>DAFSC 42673 (N=193)</u>	<u>DAFSC 42699 (N=138)</u>
FLIGHTLINE	29	42	32	7
JET ENGINE SHOP	27	21	14	12
PHASE DOCK	11	12	8	3
PROPELLER SHOP	9	5	6	-
TEST CELL	5	3	5	1
ACCESSORY REPAIR	5	2	1	1
SUPPLY AND TOOLS	3	3	6	1
SMALL GAS TURBINE SHOP	2	2	1	-
NONPOWERED AGE	2	2	1	-
QUALITY CONTROL	-	*	4	1
FIELD MAINTENANCE STAFF	2	2	3	5
PROPULSION BRANCH STAFF	2	2	4	46
HIGHER HEADQUARTERS INSPECTION	-	*	-	3
HIGHER HEADQUARTERS STAFF	-	-	2	14

\* DENOTES LESS THAN .5 PERCENT



## ANALYSIS OF 426X3 AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data were compared to the AFR 39-1 Specialty Descriptions for the Turboprop Propulsion Mechanic and Turboprop Propulsion Technician, dated 30 April 1980. The Aircraft Propulsion Superintendent comparison was discussed in Section II along with the 426X2 descriptions.

The specialty description for the Turboprop Propulsion Technician accurately reflects the combined technical and supervisory nature of the 7-skill level job. The 3/5-skill level description is also complete and accurately portrays the technical nature of the job.

## ANALYSIS OF 426X3 TAFMS GROUPS

Utilization patterns for survey respondents in different Total Active Federal Military Service (TAFMS) groups were reviewed to determine if there were differences in tasks performed. As is typical in most career ladders, as time in service increased, there was generally a corresponding increase in performance of duties involving supervisory, managerial, training, administrative, and quality control tasks (see Table 44). As time spent in duties involving performance of supervisory or administrative type tasks increased, performance time on tasks in the technical maintenance functions declined. Through the fourth enlistment (145-192 months), the job remained essentially technical, with 53 percent of the job time spent on duties involving performance of technical tasks pertaining to engine and propeller maintenance on the flightline, in the shop, or at the test cell.

### First-Enlistment Personnel

First-enlistment personnel (1-48 months) spent the vast majority of their job time performing engine and propeller maintenance tasks on the flightline and in the shop, with a greater proportion of the maintenance spent on engine maintenance than on propeller maintenance (see Table 44). Highly technical in nature, job duties involving maintenance and supporting administrative tasks account for 93 percent of their relative work time. Typical tasks include removing or installing oil or starter system components, rigging propeller control linkages, and removing or installing engines and propellers on aircraft. Additional representative tasks are listed in Table 45. Figure 3 displays the distribution of first-term members across the career ladder groups and reflects that the largest percentage of this group of airmen perform a flightline oriented job.

First-term 426X3 members are primarily involved with maintenance on the T-56 engine and 54H30 propeller (see Table 46). They also work with a variety of aerospace ground equipment (AGE), test equipment, and special tools. AGE used by five percent or more of this group is listed in Table 47, while Table 48 reflects test equipment or special tools used by five percent or more of 426X3 first-enlistment personnel.

### Job Satisfaction Data

Table 49 presents data reflecting the job interest, perceived utilization of talents and training, and reenlistment intentions of selected TAFMS groups. Comparisons were also made between 426X3 TAFMS groups and comparative samples of all other Mission Equipment Maintenance career ladders surveyed in 1980. These job satisfaction indicators are higher across the board for 426X3 personnel than for the comparative sample. By and large, Turboprop Propulsion maintenance personnel are somewhat happier in their jobs than are members of the other Mission Equipment Maintenance career ladders.

TABLE 44

## PERCENT TIME SPENT PERFORMING DUTIES BY 426X3 TAFMS GROUPS

DUTIES	MONTHS TAFMS					
	1-48 (N=482)	49-96 (N=139)	97-144 (N=82)	145-192 (N=77)	193-240 (N=54)	241+ (N=12)
A ORGANIZING AND PLANNING	2	4	9	8	12	13
B DIRECTING AND IMPLEMENTING	3	6	9	10	17	15
C INSPECTING AND EVALUATING	1	2	4	6	9	9
D TRAINING	1	5	6	7	7	7
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	9	10	10	11	13	20
F PERFORMING QUALITY CONTROL FUNCTIONS	3	3	4	5	7	4
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	10	9	9	6	6	6
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	9	6	6	4	3	2
I PERFORMING BALANCE SHOP FUNCTIONS	*	*	*	*	*	-
J PERFORMING TEST CELL FUNCTIONS	1	1	1	1	1	*
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	1	1	*	1	*	*
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	35	28	20	21	15	11
M PERFORM CROSS UTILIZATION TRAINING (CUT) DUTIES	2	3	2	2	1	1
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	4	4	3	4	2	2
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	6	5	5	3	1	4
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	13	13	12	11	6	6
TOTAL	100	100	100	100	100	100

\* INDICATES LESS THAN .5 PERCENT

TABLE 45

REPRESENTATIVE TASKS PERFORMED BY 426X3 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

TASKS	PERCENT MEMBERS PERFORMING (N=482)
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	67
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	67
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	66
L393 SERVICE ENGINE OIL SYSTEMS	62
L394 SERVICE STARTER UNITS	58
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	58
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	57
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	56
L388 RIG PROPELLER CONTROL LINKAGES	54
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	53
L290 CLEAN ENGINES	52
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	51
L293 DRAIN FUEL FILTERS	51
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	51
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	50
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	50
L380 REMOVE OR INSTALL TURBINE INLET TEMPERATURE (TIT) SYSTEM COMPONENTS	50
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	49
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	49
L378 REMOVE OR INSTALL TORQUE INDICATING SYSTEM PICKUPS	48
N348 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	47
P573 REMOVE OR INSTALL SPINNER NOSES	46
P566 REMOVE OR INSTALL PROPELLER BRUSH BLOCKS	44
P563 REMOVE OR INSTALL PITCH LOCK REGULATORS	41
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	41

AVERAGE NUMBER OF TASKS PERFORMED - 82

FIGURE 3

DISTRIBUTION OF 426X3 FIRST ENLISTMENT PERSONNEL  
ACROSS CAREER LADDER JOBS  
(PERCENT MEMBERS RESPONDING)

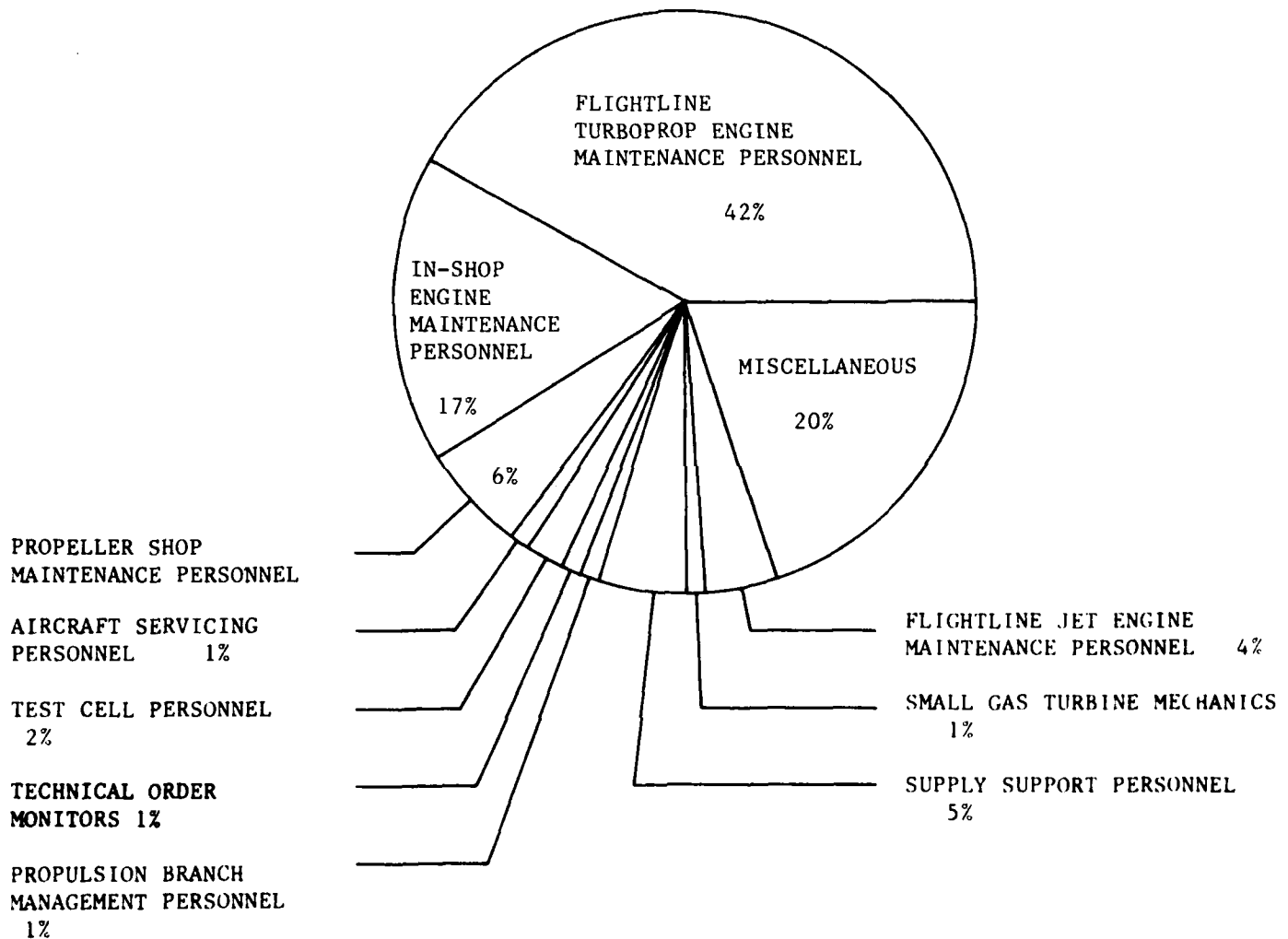


TABLE 46

ENGINES AND PROPELLERS MAINTAINED BY FIVE PERCENT OR  
MORE OF 426X3 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

<u>ENGINES OR PROPELLERS MAINTAINED</u>	<u>PERCENT MEMBERS MAINTAINING (N=482)</u>
T-56	75
GTC-85-71/71A	27
GTC-85-70/70A	13
T-58	13
T-64	10
T-400	7
J-60	6
T-62	6
TF-33	5
54H60 PROPELLERS	56
33LF337 PROPELLERS	5

TABLE 47

AEROSPACE GROUND EQUIPMENT (AGE) USED BY FIVE PERCENT OR MORE  
OF 426X3 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

<u>AGE USED</u>	<u>PERCENT MEMBERS USING (N=482)</u>
ENGINE TRANSPORTATION DOLLIES OR TRAILERS	59
ENGINE REMOVAL AND INSTALLATION DOLLIES OR TRAILERS	55
MD-3 GENERATORS	49
FORK LIFTS	48
POWERED OVERHEAD HOISTS	46
PORTABLE HOISTS	45
NF-2 LIGHTS	37
MA-1A GAS TURBINES	36
BT-400 GROUND HEATERS	28
TRACTORS	24
CLARK TUGS	12
COLEMAN TUGS	12
H-1 GROUND HEATERS	10
AM 32A-60 GAS TURBINES	9
MC-1A AIR COMPRESSORS	6

TABLE 48

TEST EQUIPMENT OR SPECIAL TOOLS USED BY FIVE PERCENT OR MORE  
OF 426X3 FIRST ENLISTMENT PERSONNEL  
(1-48 MONTHS TAFMS)

TEST EQUIPMENT OR SPECIAL TOOLS USED	PERCENT MEMBERS USING (N=482)
BORESCOPIES	64
"YELLOW BOX" TESTERS	64
ELECTRONIC TEMPERATURE DATUM TESTERS	49
PORTABLE THERMOCOUPLE TESTERS	45
DIRECT PRESSURE GAUGES	42
DEPTH GAUGES	41
ELECTRICAL COMPONENTS CHECKOUT TEST SETS	30
FLIGHTLINE TROUBLESHOOTING TESTERS	28
RPM AND PHASE ANGLE TESTERS	26
SYNCROPHASER TEST SETS	24
GTC ANALYZERS	21
AIRCRAFT ENGINE TEST STANDS	18
PORTABLE ENGINE TEST STANDS	15
MICROMETER CALIPERS	14
NOZZLE TESTERS	11
ENGINE MAX POWER ADJUSTING TEST SETS	10
INLET GUIDE VANE TESTERS	9
JET CAL TESTERS	9
CONSOLE TESTER-ELECTRICAL COMPONENTS	7
PORTABLE VIBRATION ANALYZERS	7
VALVE HOUSING TEST STANDS	7
VIBRATION ANALYZERS	6
BEARING CLEANERS	6
HUB OIL TESTERS	5
TRAILER MOUNTED UNIVERSAL GAS TURBINE ENGINE TEST STANDS	5
ULTRASONIC CLEANERS	5



TABLE 49

COMPARISON OF JOB SATISFACTION INDICATORS BY 426X3 TAFMS GROUPS  
(PERCENT MEMBERS RESPONDING)\*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	426X3 (N=482)	COMPARATIVE SAMPLE** (N=1,374)	426X3 (N=139)	COMPARATIVE SAMPLE** (N=853)	426X3 (N=225)	COMPARATIVE SAMPLE** (N=1,426)
<u>EXPRESSED JOB INTEREST:</u>						
DULL	11	24	15	17	8	14
SO-SO	19	20	21	22	20	16
INTERESTING	69	56	64	61	72	70
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	22	37	23	31	18	24
FAIRLY WELL TO PERFECTLY	78	63	77	69	82	76
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	25	30	23	28	23	25
FAIRLY WELL TO PERFECTLY	74	69	76	71	76	74
<u>REENLISTMENT INTENTIONS:</u>						
NO, OR PROBABLY NO	54	66	32	51	9	31
YES, OR PROBABLY YES	44	33	66	48	74	69

\* MAY NOT TOTAL 100 PERCENT DUE TO NONRESPONSES

\*\* COMPARATIVE SAMPLE OF MISSION EQUIPMENT MAINTENANCE CAREER LADDERS SURVEYED IN 1980  
(INCLUDES AFSCs 302X0, 307X0, 308X0, 322X2A/B/C, AND 427X3)

## AFS 426X3 MAJCOM COMPARISONS

Tasks and background data for personnel of the six major commands (MAJCOM) with the largest 426X3 populations were compared to determine whether job content varied as a function of MAJCOM assignment. MAC personnel are clearly the dominant group (79 percent of the 426X3 survey sample) and the reader must keep this in mind when comparing responses and data between MAC and the other MAJCOMs represented in the following tables.

Generally, the largest percentages of duty time and 426X3 resources in each MAJCOM are committed to the performance of tasks involving general engine and propeller maintenance in the shops or on the flightline, along with completing the paperwork that goes with the maintenance action (see Table 50). PACAF personnel reported spending slightly more relative job time on tasks involving flightline engine maintenance, as well as general and in-shop propeller maintenance, while spending slightly less relative time than the other MAJCOMs on in-shop engine maintenance. ATC personnel were distinguished from the other MAJCOMs by the greater amount of relative job time spent in performing tasks involving training and lesser amount of time spent in general engine maintenance functions. Since 42 percent of the ATC sample group reports holding a T prefix, the high duty time accorded to training activities by the group is influenced by these personnel.

A review of the specific tasks performed in support of the engines and propellers maintained by the MAJCOM groups (Table 51 displays major engines and propellers maintained) revealed no substantial differences in the overall jobs performed across the various commands. Although most of the tasks performed are common to all MAJCOMs, a few variations were noted.

Members of the three commands comprising the tactical forces (TAC, USAF, and PACAF) were more involved in tasks relating to cross utilization training (i.e., removing or replacing aircraft brake or wheel assemblies and towing aircraft), as well as performing tasks pertaining to maintenance of beta valve assemblies. TAF personnel were also distinguished by the fact that few other MAJCOM members report maintaining the engines and propeller (T-76 engine and 33LF337 propeller--see Table 51) pertaining to the OV-10 aircraft. AFSC personnel, as a result of their unique mission of test and evaluation, are exposed to a wide variety of aircraft and their power plants and differ slightly from other MAJCOM airmen in that they perform a job that is somewhat broader in scope than that performed in the other commands.

### Summary

While there were some minor variances in the relative time spent on some maintenance functions in a few commands, the vast majority of 426X3 personnel perform a job that is very similar, with most airmen performing the same basic engine and propeller maintenance functions and maintaining similar engine accessory systems.

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AIR FORCE OCCUPATIONAL MEASUREMENT CENTER RANDOLPH AFB TX F/G 5/9  
JET ENGINE MECHANIC AND TURBOPROP PROPULSION MECHANIC CAREER LA--ETC(U)  
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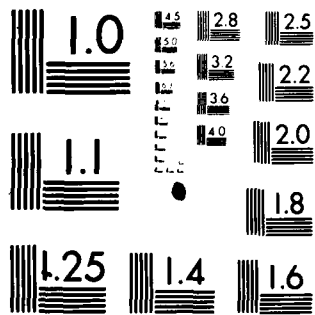
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

TABLE 50

## PERCENTAGE OF TIME SPENT ON DUTIES BY 426X3 MAJCOM GROUPS

DUTIES	MAC (N=671)	ATC (N=59)	TAC (N=38)	USAFE (N=38)	PACAF (N=16)	AFSC (N=12)
A ORGANIZING AND PLANNING	4	9	7	4	1	4
B DIRECTING AND IMPLEMENTING	5	9	8	7	3	9
C INSPECTING AND EVALUATING	2	3	4	3	1	3
D TRAINING	2	16	4	2	1	2
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	10	9	10	10	7	8
F PERFORMING QUALITY CONTROL FUNCTIONS	4	3	5	3	2	10
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	9	6	8	10	16	9
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	8	3	7	9	3	2
I PERFORMING BALANCE SHOP FUNCTIONS	*	*	*	1	*	*
J PERFORMING TEST CELL FUNCTIONS	1	*	1	2	1	*
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	1	*	*	*	*	*
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	32	17	24	27	30	24
M PERFORM CROSS UTILIZATION TRAINING (CUT) DUTIES	2	1	4	7	4	2
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	4	3	2	3	4	6
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	4	9	6	3	10	5
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	12	12	10	9	17	16
TOTAL	100	100	100	100	100	100

\* DENOTES LESS THAN .5 PERCENT

TABLE 51

COMPARISON OF ENGINES AND PROPELLERS MAINTAINED BY TEN PERCENT  
OR MORE OF 426X3 MAJCOM GROUP PERSONNEL  
(PERCENT MEMBERS MAINTAINING)

ENGINES AND PROPELLERS	MAC (N=671)	ATC (N=59)	TAC (N=47)	USAFE (N=38)	PACAF (N=16)	AFSC (N=12)
GTC-85-70/70A	14	12	9	5	19	8
GTC-85-71/71A	30	39	21	-	31	33
J-33	-	-	-	-	31	-
J-57	4	-	-	3	25	-
J-69	-	-	-	3	-	25
J-79	3	-	6	3	13	-
T-56	74	64	30	8	44	83
T-58	15	-	28	-	-	50
T-62	7	-	13	21	25	33
T-64	8	-	11	47	31	83
T-76	-	2	23	58	31	-
TF-33	9	-	-	-	31	8
54H60 PROPELLER (C-130 AIRCRAFT)	56	71	26	8	50	75
33LF337 PROPELLER (OV-10 AIRCRAFT)	2	-	21	61	31	-

## ANALYSIS OF 42653 CONUS VERSUS OVERSEAS GROUPS

Comparisons were made of the tasks performed and background data for the 323 DAFSC 42653 personnel assigned to the Continental United States (CONUS) versus the 142 in the sample assigned to overseas locations. Overseas personnel reported performing a slightly higher average number of tasks than CONUS members (104 tasks versus 93); however, close review of the tasks comprising the jobs showed essentially no difference in the overall jobs performed by the two groups. Even though the overall jobs do not vary, there are some notable differences in types of engines and propellers maintained (see Table 52), with overseas personnel reporting slightly more personnel involved with maintenance on jet engines (i.e., J-57, TF-33, and TF-39), helicopter turboshaft engines, and propellers for the OV-10 aircraft.

Comparison of background data revealed that overseas members averaged slightly more time in the career field (45 months versus 38 months for CONUS) and more time in service (58 months TAFMS versus 48 months TAFMS for CONUS). Common job satisfaction indicators of job interest and perceived utilization of talent and training were very similar (positive responses ranging from percentages in the mid-sixties for job interest to the mid-seventies for talent and training). Fifty-three percent of both groups reported positive intentions to remain in the Air Force.

TABLE 52

COMPARISON OF ENGINES AND PROPELLERS MAINTAINED  
BY FIVE PERCENT OR MORE DAFSC 42653 CONUS AND  
OVERSEAS PERSONNEL  
(PERCENT MEMBERS PERFORMING)

<u>ENGINES OR PROPELLERS MAINTAINED</u>	<u>CONUS MEMBERS (N=323)</u>	<u>OVERSEAS MEMBERS (N=142)</u>
GTC-85-70/70A	12	18
GTC-85-71/71A	27	31
GTCP-165-1	0	5
J-57	3	9
J-60	5	8
JT-8D	1	7
T-56	72	61
T-58	11	11
T-62	5	5
T-64	5	12
T-76	3	11
T-400	7	4
TF-33	3	17
TF-39	1	11
54H60 PROPELLER	55	52
33LF337 PROPELLER	4	13



## AFS 426X3 TRAINING ANALYSIS

Potential use of survey data in development of training programs was explained in the discussion of the 426X2 career ladder in Section II and need not be repeated here. For the 426X3 career ladder, technical school personnel from the Chanute Technical Training Center, Chanute AFB, Illinois, matched inventory tasks to appropriate sections of the STS and POI for Course 3ABR42633. It was this matching upon which the comparisons of data to training documents was based. A complete computer listing reflecting the percent members performing, training emphasis ratings, and task difficulty ratings for each task statement, along with STS and POI matching, has been forwarded to the technical school for their use in any further detailed review of training documents. A summary of that information is described below.

### Training Emphasis

Table 53 lists the top 20 tasks which the raters indicated as requiring the highest training emphasis. While the percentages of first-enlistment personnel performing these tasks are not high (only five tasks are performed by 50 percent or above), only one task has less than 30 percent of the sample group performing. This suggests that the tasks, on the whole, are deserving of some form of common structured training. Review of Table 53 reflects that 14 of the 20 tasks were matched to the 3ABR42633 POI, indicating they are currently taught in the technical school. Of the six tasks not matched to the POI, all have over 30 percent of the first-term members doing them, and four were rated above average in difficulty. This would indicate that resident course training on these tasks may be appropriate (see following POI discussion).

### Specialty Training Standard (STS)

A comprehensive review of STS 426X3, dated December 1979, was made, comparing STS items to survey data. STS paragraphs containing general information or subject matter knowledge requirements were not evaluated. Overall, the STS provides comprehensive coverage of the job performed by personnel in the field, with survey data supporting significant STS paragraphs or subparagraphs. While some tasks did not have high percentages of personnel performing them, high training emphasis ratings for those tasks, or the fact that the tasks were part of a specialized job being performed in the career ladder, supports the retention of STS elements involving those tasks. Computer printouts reflecting the match between STS items and survey sample data have been furnished to the technical school for additional review.

### Plan of Instruction (POI)

Based on the previously mentioned assistance from technical school subject matter specialists in matching inventory tasks to the 3ABR42633 POI, dated 8 April 1981, a computer product was generated displaying the results

of that matching process. Information furnished for consideration includes training emphasis (TE) and task difficulty (TD) ratings, as well as percent members performing data for first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel.

Most POI blocks and objectives appear to be supported by survey data based on percentages of first-term personnel performing tasks or the high training emphasis ratings calculated for those tasks. There are units in Blocks I and III that are not supported, however (see Table 54 for representative tasks selected from those Blocks). All of the tasks identified have less than 30 percent of the sample population performing and the vast majority do not reflect high training emphasis ratings (4.97 or higher) or above average task difficulty. If, due to the nature of the task, formal training is judged to be necessary, regardless of the low percent members performing, it may be more appropriate to shift training on these tasks from the resident course to OJT.

Additionally, some apparently significant tasks with very high training emphasis, above average task difficulty ratings, and 30 percent or more first-job or first-enlistment personnel performing were not matched to POI blocks (see Table 55). This combination of high training emphasis ratings, above average task difficulty ratings, and higher percent performing indicates that formal training may be required and that resident technical training could be supported.

Subject matter specialists and training personnel should further evaluate the subject areas and tasks discussed above in an effort to resolve the necessity for training and the most effective method to accomplish it.

TABLE 53

## TASKS RATED HIGHEST IN TRAINING EMPHASIS FOR 426X3 PERSONNEL

TASKS	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING	
			FIRST ENLISTMENT (N=482)	TOTAL SAMPLE 426X3 (N=848)
* G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	7.05	6.26	51	50
* N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	6.95	6.34	47	46
* E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD (AFTO FORM 349)				
* E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG (AFTO FORM 350)	6.62	4.35	57	61
G158 ADJUST GEARBOX OIL PRESSURE	6.57	4.12	67	70
* G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	6.54	4.17	31	32
* L388 RIG PROPELLER CONTROL LINKAGES	6.52	4.41	43	43
* P521 ADJUST COORDINATOR-TO-PROPELLER LINKAGES	6.51	6.13	54	52
* G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	6.46	5.56	40	38
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	6.41	6.16	42	40
* E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	6.33	6.62	36	38
G177 PERFORM HOME STATION CHECKS ON INSTALLED ENGINES	6.28	4.72	41	47
N423 ADJUST NEGATIVE TORQUE SIGNAL (NTS) SYSTEMS	6.16	5.35	42	41
* P586 RIG VALVE HOUSINGS	6.16	3.83	43	41
* G185 REMOVE OR INSTALL ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEM COMPONENTS	6.16	5.62	32	34
L329 ISOLATE MALFUNCTIONS IN ENGINE TEMPERATURE DATUM SYSTEMS	6.13	5.52	38	38
* G162 ATTACH ENGINES TO AIRCRAFT INSTALLATION OR REMOVAL EQUIPMENT, SUCH AS SELF-PROPELLED CRANES	6.10	6.63	39	40
* L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	6.08	5.06	44	43
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	6.03	4.95	56	52
* G179 PERFORM PHASE INSPECTIONS ON INSTALLED ENGINES	5.98	5.76	39	43
	5.97	6.05	25	27

\* INDICATES TASKS MATCHED TO POI FOR 3ABR42633

TABLE 54

POI BLOCKS REFLECTING LOW FIRST ENLISTMENT TASKS PERFORMED  
(LESS THAN 30 PERCENT PERFORMING)

POI REFERENCE BLOCK-UNIT	REPRESENTATIVE TASKS	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT MEMBERS PERFORMING	
				FIRST JOB (N=263)	FIRST ENLISTMT (N=482)
I 4e (3 HRS)	0476 MEASURE PROPELLER PARTS FOR WEAR	3.69	4.43	8	8
	0475 MEASURE PROPELLER PARTS FOR BOLT STRETCH	3.51	3.89	4	5
	0477 MEASURE PROPELLER PARTS TO DETERMINE INSERT SELECTIONS	2.72	4.91	1	2
III 2c	0508 REMOVE OR INSTALL DEICER CONTACT RING ASSEMBLIES	4.33	4.16	11	10
	0515 REMOVE OR INSTALL SPINNER CENTER SECTIONS	4.10	4.14	11	11
III 3b/3c	0508 REMOVE OR INSTALL DEICER CONTACT RING ASSEMBLIES	4.33	4.16	11	10
	0515 REMOVE OR INSTALL SPINNER CENTER SECTIONS	4.10	4.14	11	11
III 5b	P565 REMOVE OR INSTALL PROPELLER BLADES ON HUBS	4.87	4.87	15	13
	0513 REMOVE OR INSTALL PROPELLER ON ASSEMBLY STANDS	4.62	3.85	19	19
	0504 REMOVE OR INSTALL BLADE PACKINGS	3.79	3.80	10	10
III 6b	0470 INSTALL PROPELLER BLADES IN HUBS	5.26	4.90	13	13
	0507 REMOVE OR INSTALL BULKHEAD ASSEMBLIES	4.38	4.06	13	12
	0502 REMOVE OR INSTALL BLADE BEARING ASSEMBLIES	3.64	4.21	7	7
III 7b	0448 ASSEMBLE OR DISASSEMBLE DOME ASSEMBLIES	5.41	4.87	17	15
	0466 INSTALL DOME PREFORMED PACKINGS	4.21	3.68	14	16
III 12a (5 HRS)	P532 CLEAN PROPELLERS OR RELATED COMPONENTS OTHER THAN OIL FILTERS	4.46	3.53	17	22
	0446 APPLY PRESERVATIVE TO PROPELLERS OR COMPONENTS	4.08	3.11	8	10
	0461 CRATE OR UNCRATE PROPELLERS	3.69	2.59	10	11

TABLE 55

TASKS NOT REFERENCED TO 3ABR42633 POI BLOCKS  
(30 PERCENT OR MORE PERFORMING)

TASKS NOT REFERENCED	TRAINING EMPHASIS*	TASK DIFFICULTY**	PERCENT MEMBERS PERFORMING		
			FIRST JOB (N=263)	FIRST ENLISTMENT (N=482)	
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	6.33	6.62	23		36
G177 PERFORM HOME STATION CHECKS ON INSTALLED ENGINES	6.16	5.35	35		42
L329 ISOLATE MALFUNCTIONS IN ENGINE TEMPERATURE DATUM SYSTEMS	6.10	6.63	30		39
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	5.98	5.76	29		39
G173 ISOLATE MALFUNCTIONS IN TURBOPROP ENGINE TORQUE INDICATING SYSTEMS	5.92	5.82	26		34
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	5.88	5.65	25		34
L337 ISOLATE MALFUNCTIONS ON ENGINE CONTROL LINKAGE SYSTEMS	5.85	5.69	25		33
L332 ISOLATE MALFUNCTIONS IN ENGINE TURBINE INLET TEMPERATURE (TIT) SYSTEMS					
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	5.82	5.97	26		33
L326 ISOLATE MALFUNCTIONS IN ENGINE REDUCTION GEARBOX SYSTEMS	5.79	6.46	25		33
G171 ISOLATE MALFUNCTIONS IN ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEMS	5.64	5.78	24		31
L316 ISOLATE MALFUNCTIONS IN ENGINE BLEED AIR SYSTEMS	5.49	6.11	22		31
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	5.48	5.50	24		32
L315 ISOLATE MALFUNCTIONS IN ENGINE ANTI-ICING SYSTEMS	5.30	5.08	24		32
	5.26	5.74	22		30

\* TRAINING EMPHASIS RATING OF 4.97 OR BETTER IS HIGH

\*\* TASK DIFFICULTY RATING OF 5.00 IS AVERAGE

## AFSC 426X0-426X3 MERGER ANALYSIS

In October 1979, the Aircraft Propeller Mechanic career ladder (AFSC 426X0) was deleted and assigned personnel were converted and merged into the newly formed Turboprop Propulsion Mechanic ladder (AFSC 426X3). The new 426X3 ladder was to have maintenance responsibility for both turboprop engines and propellers. When such a change occurs, it is desirable to assess how well the personnel and functions of the specialty eliminated have been integrated into the gaining career ladder.

To perform this evaluation, personnel in the survey sample who previously held AFSC 426X0 (and who were converted to 426X3) were identified from specific survey responses and a special job description of the tasks currently performed by the group was created. Evaluation of the group of 108 members identified showed that the vast majority hold 5- and 7-skill level AFSCs, average 66 months in the career field, and hold an average grade of 4.6. Two AFMS groups with similar characteristics (one with averages slightly higher and one slightly lower than the target group) and a group of non-prior 426X0 personnel (426X3 airmen) were identified and used for comparisons (see Table 56 for background information).

Table 57 compares representative tasks selected from the job inventory based on the specific maintenance orientation of the groups of tasks (i.e., DUTY N--PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS). Upon review of the propeller specific duties (DUTIES N, O, and P) it is obvious that the percentages of members performing the tasks are higher for the prior 426X0 personnel group. The key point to recognize, though, is that the differences in percentages of members performing from the other groups are not great. There are, in fact, significant numbers of non-prior 426X0 personnel performing specialized propeller maintenance tasks (the largest variance occurs in the shop-oriented maintenance tasks - DUTY O). Conversely, reviewing the predominantly engine maintenance specific duties (DUTIES G, H, and L), it is clear that prior 426X0 airmen are performing engine maintenance tasks on par with the non-prior 426X0 personnel (see Table 56 for distribution by engines and propellers). Since it would be expected for supervisors to utilize the prior propeller maintenance skills of their personnel where possible, it is not a cause for concern that slightly higher percentages of prior 426X0 members perform propeller specific tasks. Rather, the point to be made from these comparisons is that ex-426X0 personnel can be expected to be performing the normal range of 426X3 career ladder tasks based on the functions to which they are assigned.

Having made comparisons based on tasks performed, we may also look at prior 426X0 personnel member data from another viewpoint as well. As was pointed out in the CAREER LADDER STRUCTURE ANALYSIS section, two career ladder groups were found which were specializing in propeller maintenance functions (GRP383-Flightline Propeller Maintenance Specialists and GRP161-Propeller Shop Maintenance Personnel). The flightline group was composed of 26 members, 13 of which were prior 426X0 personnel. The shop group numbered 46 airmen, with 14 indicating they were prior Aircraft Propeller Mechanics. The two specialized propeller maintenance groups account for a total of 72 personnel, of which only 27 are converted AFS 426X0

airmen. Thus, with only 27 of the 108 identified converted airmen in these two specialized groups (25 percent), 75 percent of the convertes are dispersed across the other job groups in the career ladder structure (e.g., 45 members are in the Flightline Engine and Propeller Maintenance Specialists group) and, as such, are performing a variety of other 426X3 career ladder tasks and are not specializing to an unacceptable degree.

In summary, the data indicate that prior 426X0 personnel have been effectively assimilated in the 426X3 career ladder and that 426X3 personnel are, on the whole, performing the full range of the Turboprop Propulsion Mechanic's duties.

TABLE 56

SELECTED BACKGROUND DATA ON PRIOR AFS 426X0 AIRCRAFT PROPELLER  
MECHANICS AND OTHER 426X3 PERSONNEL GROUPS

	PRIOR 426X0	NON-PRIOR 426X0	AFSC 426X3	
			49-96 MOS TAFMS	97-144 MOS TAFMS
NUMBER IN GROUP	108	751	139	82
AVERAGE GRADE	4.6	4.0	4.5	5.3
AVERAGE MONTHS IN CAREER FIELD	66	51	52	93
AVERAGE MONTHS IN SERVICE	95	67	69	121
PERCENT WITH DAFSC 42653 OR 42673	84%	76%	99%	100%

PERCENT IN PREDOMINANT JOB FUNCTIONS:

FLIGHTLINE	41%	36%	42%	40%
JET ENGINE SHOP	19%	21%	19%	15%
PHASE DOCK	10%	11%	12%	9%
PROPELLER SHOP	12%	5%	7%	7%
TEST CELL	1%	4%	2%	5%

PERCENT MAINTAINING PREDOMINANT  
ENGINES/PROPELLERS:

GTC-85-70/70A	11%	13%	14%	9%
GTC-85-71/71A	24%	29%	31%	28%
T-56	58%	67%	64%	55%
T-58	13%	15%	19%	15%
T-62	6%	8%	11%	9%
T-64	12%	11%	10%	13%
T-76	7%	5%	7%	6%
TF-33	8%	8%	11%	13%
54H60 PROPELLER	76%	49%	55%	60%
33LF337 PROPELLER	8%	6%	8%	6%



TABLE 57

COMPARISON OF SELECTED REPRESENTATIVE TASKS PERFORMED BY PRIOR AFS 426X0  
AIRCRAFT PROPELLER MECHANICS WITH OTHER 426X3 GROUPS  
(PERCENT MEMBERS PERFORMING)

TASKS	PRIOR 426X0 (N=108)	NON-PRIOR 426X0 (N=751)	AFSC 426X3	
			49-96 MOS TAFMS (N=139)	97-144 MOS TAFMS (N=82)
<u>FROM DUTY G - PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS</u>				
G159 ALIGN INSTALLED ENGINES	30	29	37	29
G162 ATTACH AIRCRAFT ENGINES TO AIRCRAFT INSTALLATION OR REMOVAL EQUIPMENT, SUCH AS SELF-PROPELLED CRANES	43	42	48	44
G173 ISOLATE MALFUNCTIONS IN TURBOPROP ENGINE TORQUE INDICATING SYSTEMS	41	35	42	38
G179 PERFORM PHASE INSPECTIONS ON INSTALLED ENGINES	36	26	40	29
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	51	42	53	39
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	51	50	58	48
<u>FROM DUTY H - PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS</u>				
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	18	22	19	18
H235 REMOVE OR INSTALL COMBINING GEARBOXES	10	17	19	11
H238 REMOVE OR INSTALL ENGINE BEARINGS	11	19	18	10
H239 REMOVE OR INSTALL ENGINE INTERNAL OIL SEALS	14	18	18	11
H244 REMOVE OR INSTALL TORQUE SHAFTS	17	22	25	21
<u>FROM DUTY L - PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS</u>				
L301 INSPECT ENGINE PLUMBING	38	50	58	50
L315 ISOLATE MALFUNCTIONS IN BLEED AIR SYSTEMS	33	35	42	40
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	32	38	49	44
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	31	41	42	39
L379 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	45	52	53	40

TABLE 57 (CONTINUED)

COMPARISON OF SELECTED REPRESENTATIVE TASKS PERFORMED BY PRIOR AFS 426X0  
AIRCRAFT PROPELLER MECHANICS WITH OTHER 426X3 GROUPS  
(PERCENT MEMBERS PERFORMING)

TASKS	AFSC 426X3			
	PRIOR 426X0 (N=108)	NON-PRIOR 426X0 (N=751)	49-96 MOS TAFMS (N=139)	97-144 MOS TAFMS (N=82)
<u>FROM DUTY N - PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS</u>				
N423 ADJUST NEGATIVE TORQUE SIGNAL (NTS) SYSTEMS	58	38	39	41
N431 PERFORM OPERATIONAL CHECKS OF PITCH LOCK	56	31	37	41
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	62	43	48	45
N439 REMOVE OR INSTALL RELAYS	32	12	19	18
<u>FROM DUTY O - PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS</u>				
O442 ADJUST PROPELLER BLADE TORQUE	28	15	20	20
O448 ASSEMBLE OR DISASSEMBLE DOME ASSEMBLIES	30	13	22	16
O470 INSTALL PROPELLER BLADES IN HUBS	26	11	14	16
O482 PERFORM INTERNAL LEAK CHECKS OF PROPELLER ASSEMBLIES	30	11	17	12
O506 REMOVE OR INSTALL BRUSH BLOCK ASSEMBLIES	40	20	24	28
<u>FROM DUTY P - PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS</u>				
P541 ISOLATE PROPELLER MALFUNCTIONS	62	25	40	37
P544 PERFORM OPERATIONAL CHECKS OF FEATHER	52	27	36	38
P565 REMOVE OR INSTALL PROPELLER BLADES ON HUBS	31	12	17	20
P573 REMOVE OR INSTALL SPINNER NOSES	64	40	45	43
P581 REPAIR CUFFS, AFTERBODIES, OR SPINNERS	54	21	30	29
P582 REWORK PROPELLER BLADE NICKS, BURRS, OR SCRATCHES	66	34	45	40

## SECTION IV

### 426X2 AND 426X3 GENERAL CAREER LADDER COMPARISONS

Although the basic purpose of this survey was to provide data for use in training decisions, a comparison was also made between various groups of the two career ladders to evaluate ladder similarities and differences.

There are clearly areas of commonality between the two ladders. Most paperwork and supply function tasks reflect comparable percentages of members from each career ladder performing the tasks. There are also a number of technical maintenance tasks (see Table 58) performed by essentially equivalent percentages of personnel from both career ladders which are applicable to jet and turboprop engines or related systems (such as, engine oil or fuel, ignition, starter, exhaust, and compressor airflow control).

Even though there are a number of areas of commonality, distinctions can be made in the jobs they perform in maintaining systems which are peculiar to either jet or turboprop engines. Table 59 provides a display of these differences, with 426X2 personnel responding to afterburner and engine pressure ratio (EPR) system tasks, while 426X3 members responded to temperature datum system, torque indicating system and the propeller maintenance tasks. Table 60 displays the differences in the amount of relative job time spent on the various duties by each career ladder, and further shows the distinction between the ladders as depicted by the difference in relative time spent on tasks relating to propeller maintenance functions. While many 426X3 personnel perform some tasks which are common to jet engines or related systems, almost no 426X2 personnel perform tasks pertaining to propeller maintenance, thus indicating only a one-way overlap between the two ladders.

Although there are differences in the jobs performed by the two ladders, they do work in essentially the same flightline and shop environments and deal with similar job goals and frustrations. Interestingly, an evaluation of job satisfaction indications from similar groups of ladder personnel (see Table 61) revealed no major differences between sample personnel in their perceptions of utilization of talents and training or in job interest.

TABLE 58  
EXAMPLES OF TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE OF  
BOTH DAFSC 42652 AND DAFSC 42653 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	DAFSC 42652 (N=1,492)	DAFSC 42653 (N=467)
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD (AFTO FORM 349)	60	62
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG (AFTO FORM 350)	71	75
E142 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL (DD FORM 1577 OR DD FORM 1577-1)	42	46
F146 INSPECT ENGINES OR ASSOCIATED EQUIPMENT FOR CORROSION CONTROL	34	32
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	31	46
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	30	48
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	38	55
L293 DRAIN FUEL FILTERS	42	50
L297 INSPECT COMPRESSORS	48	45
L298 INSPECT ENGINE CONTROLS	34	46
L301 INSPECT ENGINE PLUMBING	55	51
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	32	43
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	33	42
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	34	48
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	31	48
L347 REMOVE OR INSTALL ACCESSORY GEAR BOX ASSEMBLY COMPONENTS	40	42
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	49	51
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	50	49
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	43	43
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	65	64
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	64	66
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	44	36
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	56	55
L369 REMOVE OR INSTALL PNEUMATIC STARTER UNITS	33	37
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	35	66
L372 REMOVE OR INSTALL RPM INDICATOR SYSTEM COMPONENTS	33	34
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	51	61
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	52	49
L393 SERVICE ENGINE OIL SYSTEMS	46	64

TABLE 59  
TECHNICAL TASKS WHICH BEST DIFFERENTIATE BETWEEN 426X2 AND 426X3 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

TASKS	426X2 PERSONNEL (N=2,615)	426X3 PERSONNEL (N=848)	DIFFERENCE
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	42	11	+31
L360 REMOVE OR INSTALL EXHAUST GAS TEMPERATURE (EGT) SYSTEM COMPONENTS	42	18	+24
L294 INSPECT AFTERBURNERS	26	2	+24
L385 RIG AFTERBURNER SYSTEMS	24	2	+22
L359 REMOVE OR INSTALL ENGINE PRESSURE RATIO (EPR) SYSTEM COMPONENTS	28	7	+21
L348 REMOVE OR INSTALL AFTERBURNER SYSTEM COMPONENTS	23	2	+21
L364 REMOVE OR INSTALL INLET GUIDE VANE (IGV) SYSTEM COMPONENTS	31	12	+19
L350 REMOVE OR INSTALL CARTRIDGE-PNEUMATIC STARTER UNITS	31	12	+19
H237 REMOVE OR INSTALL COMPRESSORS	25	8	+17
L304 INSPECT FAN SECTION COMPONENTS	21	6	+15
L288 BLEND INLET BLADES	41	27	+14
L387 RIG INLET GUIDE VANE (IGV) SYSTEMS	23	9	+14
H238 REMOVE OR INSTALL ENGINE BEARINGS	30	18	+12
L388 RIG PROPELLER CONTROL LINKAGES	2	52	-50
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	1	46	-45
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	8	52	-44
L378 REMOVE OR INSTALL TORQUE INDICATING SYSTEM PICKUPS	3	46	-43
P582 REWORK PROPELLER BLADE NICKS, BURRS, OR SCRATCHES	1	38	-37
L329 ISOLATE MALFUNCTIONS IN ENGINE TEMPERATURE DATUM SYSTEMS	6	40	-34
G173 ISOLATE MALFUNCTIONS IN TURBOPROP ENGINE TORQUE INDICATING SYSTEMS	3	36	-33
P546 PERFORM STATIC CHECKS OF FEATHER	1	33	-32
L371 REMOVE OR INSTALL REDUCTION GEARBOX ASSEMBLY COMPONENTS	10	41	-31
P577 REMOVE OR INSTALL SYNCHROPHASERS	1	32	-31
P571 REMOVE OR INSTALL PULSE GENERATORS	1	31	-30
L324 ISOLATE MALFUNCTIONS IN ENGINE NEGATIVE TORQUE SYSTEMS (NTS)	2	32	-30
P534 DRAIN OIL FROM PROPELLER COMPONENTS	1	30	-29
P541 ISOLATE PROPELLER MALFUNCTIONS	1	30	-29
L331 ISOLATE MALFUNCTIONS IN ENGINE TORQUEMETER ASSEMBLY SYSTEMS	2	30	-28

TABLE 60  
COMPARISON OF AVERAGE PERCENT TIME SPENT ON  
DUTIES BY 426X2 AND 426X3 PERSONNEL

DUTIES	426X2 PERSONNEL (N=2,615)	426X3 PERSONNEL (N=848)
A ORGANIZING AND PLANNING	6	4
B DIRECTING AND IMPLEMENTING	7	6
C INSPECTING AND EVALUATING	3	3
D TRAINING	4	3
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	12	10
F PERFORMING QUALITY CONTROL FUNCTIONS	5	4
G PERFORMING FLIGHTLINE ENGINE MAINTENANCE FUNCTIONS	8	9
H PERFORMING IN-SHOP ENGINE MAINTENANCE FUNCTIONS	13	8
I PERFORMING BALANCE SHOP FUNCTIONS	1	*
J PERFORMING TEST CELL FUNCTIONS	2	1
K REPAIRING AND MAINTAINING SMALL GAS TURBINE (SGT) ENGINES	1	1
L PERFORMING GENERAL ENGINE MAINTENANCE FUNCTIONS	36	30
M PERFORM CROSS UTILIZATION TRAINING (CUT) DUTIES	2	2
N PERFORMING FLIGHTLINE PROPELLER MAINTENANCE FUNCTIONS	*	(4)
O PERFORMING IN-SHOP PROPELLER MAINTENANCE FUNCTIONS	*	(3)
P PERFORMING GENERAL PROPELLER MAINTENANCE FUNCTIONS	*	(12)
TOTAL	100	100

\* DENOTES LESS THAN .5 PERCENT

TABLE 61  
COMPARISON OF JOB SATISFACTION INDICATORS BY 426X2 AND 426X3 TAFMS GROUPS  
(PERCENT MEMBERS RESPONDING)\*

	<u>1-48 MONTHS TAFMS</u>		<u>49-96 MONTHS TAFMS</u>		<u>97 + MONTHS TAFMS</u>	
	<u>426X2</u>	<u>426X3</u>	<u>426X2</u>	<u>426X3</u>	<u>426X2</u>	<u>426X3</u>
	<u>(N=1,359)</u>	<u>(N=482)</u>	<u>(N=413)</u>	<u>(N=139)</u>	<u>(N=835)</u>	<u>(N=225)</u>
<u>EXPRESSED JOB INTEREST:</u>						
DULL	10	11	7	15	7	8
SO-SO	16	19	16	21	13	20
INTERESTING	74	69	76	64	79	72
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
LITTLE OR NOT AT ALL	19	22	16	23	13	18
FAIRLY WELL TO PERFECTLY	81	78	84	77	87	82
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
LITTLE OR NOT AT ALL	19	25	16	23	15	23
FAIRLY WELL TO PERFECTLY	81	74	84	76	85	76
<u>REENLISTMENT INTENTIONS:</u>						
NO, OR PROBABLY NO	56	54	32	32	25	9
YES, OR PROBABLY YES	43	44	68	66	75	74

\* MAY NOT TOTAL 100 PERCENT DUE TO NONRESPONSES

## IMPLICATIONS

One of the primary reasons for conducting this study was to obtain current data for the technical training center to use in the evaluation and management of training programs for these two career ladders. Current training at the school for 426X2 personnel is centered around maintenance principles and procedures using the J-57 and J-79 as representative jet engines. Long the predominant engines in the field, these choices were logical and are, for now, still valid (20 percent of the survey sample first-enlistment personnel report maintaining J-57 engines, with 18 percent reporting maintenance of J-79 engines--see Table 20). The TF-33 engine, with 17 percent of the first-term airmen maintaining it, is the next highest in terms of field maintenance.

What we must be aware of are the changes which are now or will be occurring in our aircraft inventory in the near future. Aircraft using the J-57 and J-79 engines will be declining in numbers (for example the projected retirement of B-52D aircraft; reengining the entire fleet of KC-135 aircraft; and the on-going displacement of active duty F-4 aircraft with F-15 and F-16s). Aircraft inventories using the TF-33 engine (B-52H, C-141, and E-3A) will likely remain stable. Meanwhile, aircraft powered by the F-100 engine (F-15 and F-16) are projected for substantial procurement increases over time. With 13 percent of first-enlistment personnel reporting they currently maintain the F-100 engine, it becomes obvious that these numbers will continue to rise at an increasingly rapid rate as these aircraft transitions occur. Since there is also a variance in maintenance philosophy involved between the F-100 engine and the current representative engines (i.e., the modular concept of the F-100 is intended to reduce the amount of engine tear downs required), the technical school may need to acquire the F-100 engine for use in representative training

During the CAREER LADDER STRUCTURE ANALYSIS, a group of 204 airmen (representing six percent of the total survey sample) was identified as performing a job of limited scope and composed predominantly of supply and administrative type tasks (SUPPLY SUPPORT PERSONNEL). Personnel in this experienced group of airmen (an average of 69 months in the career field) were a highly dissatisfied with their job (see Tables 6 and 7); and, of the few complaint-type write-in comments received during this survey, some were directed at this area. Career ladder managers should be aware of this dissatisfaction (51 percent of the group are in their first enlistment) and evaluate the possibility of allowing these people to return to the maintenance work for which they were trained. This same situation was identified in the 1972 study of Jet Engine Mechanics and is an ongoing problem.

As was pointed out in the analysis of the specialized jet engine mechanic functions (Flightline, Shop, and Test Cell), although there are these identifiable entities in the career ladder, this AFSC should not be shredded, nor should any major training processes be changed to match this structure. The amount of shop-oriented training currently given in the technical school seems to be about what is necessary based on the general personnel utilization pattern displayed by the data. The fact that very high percentages of personnel from various groups (such as TAFMS and DAFSC) indicate that their training is used properly also appears to support the general directions of the current training system.



APPENDIX A  
REPRESENTATIVE TASKS FOR  
CAREER LADDER STRUCTURE GROUPS

TABLE I  
AIRCRAFT SERVICING PERSONNEL  
(GRP207)

TASKS	PERCENT MEMBERS PERFORMING (N=51)
M401 LAUNCH OR RECOVER AIRCRAFT	94
M421 WALK WINGS OR TAILS DURING AIRCRAFT TOWING OPERATIONS	92
M408 POSITION OR REMOVE AIRCRAFT CHOCKS	90
M403 PERFORM AIRCRAFT PREFLIGHT INSPECTIONS	90
M404 PERFORM AIRCRAFT THRU FLIGHT OR POSTFLIGHT INSPECTIONS	88
M399 GROUND AIRCRAFT	86
M419 TOW AIRCRAFT	86
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	84
M400 JACK OR LEVEL AIRCRAFT	82
L393 SERVICE ENGINE OIL SYSTEMS	80
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	80
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	78
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	75
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	75
M407 PERFORM SINGLE-POINT AIRCRAFT REFUELING OR DEFUELING	71
E130 MAKE ENTIRES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	71
M412 REMOVE OR REPLACE AIRCRAFT WHEEL ASSEMBLIES	71
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	67
M422 WASH AIRCRAFT	67
M416 SERVICE AIRCRAFT TIRES	67
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	67
M414 SERVICE AIRCRAFT HYDRAULIC SYSTEMS	65
G166 INSPECT COWLINGS FOR DAMAGE	65
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	63
M411 REMOVE OR REPLACE AIRCRAFT BRAKE ASSEMBLIES	61
M420 TOW NONPOWERED AGE	59
M415 SERVICE AIRCRAFT SHOCK STRUTS	59
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	59
M398 BLEED OR SERVICE BRAKE SYSTEMS	57
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	57
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	57
L343 PLACE PROTECTIVE COVERS ON ENGINES	55
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	55
L395 TAKE SPECTROMETRIC OIL ANALYSIS SAMPLES	53
E131 MAKE ENTRIES ON OIL ANALYSIS REQUEST FORMS (DD FORM 2026)	53

TABLE I (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

A-10	29%
C-141	20%
C-5A	16%
T-33	14%
OV-10	12%
C-130	10%
KC-135	10%
F-4	10%
UH-1	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

TF-34	31%
TF-33	20%
TF-39	16%
GTCP-36-50	10%
J-33	10%
T-76	10%

33LF337 PROPELLER	10%
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TABLE II  
FLIGHTLINE TURBOPROP ENGINE MAINTENANCE PERSONNEL CLUSTER  
(GRP353)

TASKS	PERCENT MEMBERS PERFORMING (N=342)
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	92
L393 SERVICE ENGINE OIL SYSTEMS	88
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	87
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	87
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	87
L388 RIG PROPELLER CONTROL LINKAGES	87
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	85
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	84
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	84
E134 MAKE ENTIRES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	84
P573 REMOVE OR INSTALL SPINNER NOSES	84
L394 SERVICE STARTER UNITS	82
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	82
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	80
P566 REMOVE OR INSTALL PROPELLER BRUSH BLOCKS	80
G177 PERFORM HOME STATION CHECKS ON INSTALLED ENGINES	80
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	78
P521 ADJUST COORDINATOR-TO-PROPELLER LINKAGES	78
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	77
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	77
L395 TAKE SPECTROMETRIC OIL ANALYSIS SAMPLES	77
L329 ISOLATE MALFUNCTIONS IN ENGINE TEMPERATURE DATUM SYSTEMS	76
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	76
G162 ATTACH ENGINES TO AIRCRAFT INSTALLATION OR REMOVAL EQUIPMENT, SUCH AS SELF-PROPELLED CRANES	76
P563 REMOVE OR INSTALL PITCH LOCK REGULATORS	76
P547 PERFORM STATIC CHECKS OF FLIGHT IDLE BLADE ANGLES	76
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	75
P548 PERFORM STATIC CHECKS OF GROUND IDLE BLADE ANGLES	75
P564 REMOVE OR INSTALL PROPELLER ANTI-ICING AFTERBODIES	74
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	74
N432 PERFORM OPERATIONAL CHECKS OF TORQUE OR REVERSE TORQUE	74
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	73
P582 REWORK PROPELLER BLADE NICKS, BURRS, OR SCRATCHES	72
G185 REMOVE OR INSTALL ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEM COMPONENTS	71
P577 REMOVE OR INSTALL SYNCHROPHASERS	70
G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	69
G173 ISOLATE MALFUNCTIONS IN TURBOPROP ENGINE TORQUE INDICATING SYSTEMS	68
P541 ISOLATE PROPELLER MALFUNCTIONS	61
L326 ISOLATE MALFUNCTIONS IN ENGINE REDUCTION GEARBOX SYSTEMS	60

TABLE II (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-130	83%
HC-130	36%
WC-130	26%
C-141	18%
C-5A	16%
AC-130	14%
T-39	14%
HH-53	14%
HH-3	13%
C-9	12%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-56	87%
GTC-85-71/71A	47%
GTC-85-70/70A	19%
T-58	18%
TF-33	16%
T-64	12%
TF-39	11%
J-60	10%

54H60 PROPELLER	81%
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TABLE IIa

FLIGHTLINE ENGINE AND PROPELLER MAINTENANCE SPECIALISTS  
(GRP499)

TASKS	PERCENT MEMBERS PERFORMING (N=277)
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	94
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	94
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	93
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	92
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	92
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	92
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	91
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	90
L388 RIG PROPELLER CONTROL LINKAGES	90
L393 SERVICE ENGINE OIL SYSTEMS	90
L329 ISOLATE MALFUNCTIONS IN ENGINE TEMPERATURE DATUM SYSTEMS	90
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	90
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	88
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	86
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	86
L394 SERVICE STARTER UNITS	85
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	84
N423 ADJUST NEGATIVE TORQUE SIGNAL (NTS) SYSTEMS	84
P573 REMOVE OR INSTALL SPINNER NOSES	84
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	83
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	82
G177 PERFORM HOME STATION CHECKS ON INSTALLED ENGINES	82
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	81
L380 REMOVE OR INSTALL TURBINE INLET TEMPERATURE (TIT) SYSTEM COMPONENTS	80
L395 TAKE SPECTROMETRIC OIL ANALYSIS SAMPLES	80
P521 ADJUST COORDINATOR-TO-PROPELLER LINKAGES	80
N432 PERFORM OPERATIONAL CHECKS OF TORQUE OR REVERSE TORQUE	80
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	79
P566 REMOVE OR INSTALL PROPELLER BRUSH BLOCKS	79
G173 ISOLATE MALFUNCTIONS IN TURBOPROP ENGINE TORQUE INDICATING SYSTEMS	79
L332 ISOLATE MALFUNCTIONS IN ENGINE TURBINE INLET TEMPERATURE (TIT) SYSTEMS	78
L316 ISOLATE MALFUNCTIONS IN ENGINE BLEED AIR SYSTEMS	78
P579 REMOVE OR INSTALL VALVE HOUSINGS	78
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	77
P577 REMOVE OR INSTALL SYNCHROPHASERS	73
L324 ISOLATE MALFUNCTIONS IN ENGINE NEGATIVE TORQUE SYSTEMS (NTS)	73
L326 ISOLATE MALFUNCTIONS IN ENGINE REDUCTION GEARBOX SYSTEMS	71
P541 ISOLATE PROPELLER MALFUNCTIONS	66
G164 DEBRIEF FLIGHT CREWS OR GROUND CREWS TO DETERMINE ENGINE MALFUNCTIONS	66

TABLE IIa (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-130	82%
HC-130	40%
WC-130	29%
C-141	21%
C-5A	20%
T-39	16%
AC-130	15%
C-9	14%
HH-53	14%
UH-1	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-56	88%
GTC-85-71/71A	52%
GTC-85-70/70A	21%
T-58	20%
TF-33	20%
T-64	13%
TF-39	13%
J-60	12%

54H60 PROPELLER	79%
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TABLE IIb  
FLIGHTLINE PROPELLER MAINTENANCE SPECIALISTS  
(GRP383)

TASKS	PERCENT MEMBERS PERFORMING (N=26)
P563 REMOVE OR INSTALL PITCH LOCK REGULATORS	100
P566 REMOVE OR INSTALL PROPELLER BRUSH BLOCKS	96
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	96
P586 RIG VALVE HOUSINGS	96
P546 PERFORM STATIC CHECKS OF FEATHER	96
P548 PERFORM STATIC CHECKS OF GROUND IDLE BLADE ANGLES	96
P547 PERFORM STATIC CHECKS OF FLIGHT IDLE BLADE ANGLES	96
P549 PERFORM STATIC CHECKS OF REVERSE BLADE ANGLES	92
P567 REMOVE OR INSTALL PROPELLER LINKAGE ROD ENDS	92
P582 REWORK PROPELLER BLADE NICKS, BURRS, OR SCRATCHES	92
N431 PERFORM OPERATIONAL CHECKS OF PITCH LOCK	92
P573 REMOVE OR INSTALL SPINNER NOSES	88
P538 INSPECT PROPELLERS OR RELATED COMPONENTS	88
N423 ADJUST NEGATIVE TORQUE SIGNAL (NTS) SYSTEMS	88
P571 REMOVE OR INSTALL PULSE GENERATORS	88
P541 ISOLATE PROPELLER MALFUNCTIONS	85
P577 REMOVE OR INSTALL SYNCHROPHASERS	85
P579 REMOVE OR INSTALL VALVE HOUSINGS	85
N432 PERFORM OPERATIONAL CHECKS OF TORQUE OR REVERSE TORQUE	85
P564 REMOVE OR INSTALL PROPELLER ANTI-ICING AFTERBODIES	81
P521 ADJUST COORDINATOR-TO-PROPELLER LINKAGES	81
P530 ADJUST REVERSE TORQUE	81
P561 REMOVE OR INSTALL MASTER TRIM BOXES	81
P545 PERFORM STATIC CHECKS OF BETA SCHEDULE	77
P585 RIG MECHANICAL LINKAGES FROM PROPELLER GOVERNOR CONTROLS TO COORDINATORS	77
P544 PERFORM OPERATIONAL CHECKS OF FEATHER	77
N425 PERFORM GROUND OPERATIONAL CHECKS OF NTS	77
P581 REPAIR CUFFS, AFTERBODIES, OR SPINNERS	77
P550 PERFORM TCTO MODIFICATIONS ON PROPELLERS OR RELATED COMPONENTS	73
P572 REMOVE OR INSTALL PUMP HOUSINGS	73
P543 PERFORM OPERATIONAL CHECKS OF BETA RANGE	73
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	69
N430 PERFORM OPERATIONAL CHECKS OF PERCENT OF REVOLUTIONS PER MINUTE (RPM)	69
G177 PERFORM HOME STATION CHECKS ON INSTALLED ENGINES	65
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	62
L388 RIG PROPELLER CONTROL LINKAGES	62
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	62
P540 ISOLATE MALFUNCTIONING UNITS OR CIRCUIT SEGMENTS WITHIN PROPELLER ELECTRICAL SYSTEMS	58



TABLE IIb (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-130	92%
HC-130	23%
WC-130	23%
AC-130	15%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-56	62%
GTC-85-71/71A	23%
GTC-85-70/70A	15%
54H60 PROPELLER	96%

TABLE IIc  
TURBOPROP PHASE DOCK SPECIALISTS  
(GRP377)

TASKS	PERCENT MEMBERS PERFORMING (N=39)
L393 SERVICE ENGINE OIL SYSTEMS	95
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	90
L394 SERVICE STARTER UNITS	90
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	87
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	87
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	85
N438 REMOVE OR INSTALL PROPELLERS ON AIRCRAFT	82
L395 TAKE SPECTROMETRIC OIL ANALYSIS SAMPLES	79
G166 INSPECT COWLINGS FOR DAMAGE	79
N428 PERFORM LOOK PHASE OF PROPELLER PERIODIC, PHASED, OR ISOCHRONAL INSPECTIONS	79
P573 REMOVE OR INSTALL SPINNER NOSES	79
L388 RIG PROPELLER CONTROL LINKAGES	79
G179 PERFORM PHASE INSPECTIONS ON INSTALLED ENGINES	74
G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	74
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	74
P566 REMOVE OR INSTALL PROPELLER BRUSH BLOCKS	74
G177 PERFORM HOME STATION CHECKS ON INSTALLED ENGINES	72
P538 INSPECT PROPELLERS OR RELATED COMPONENTS	72
L293 DRAIN FUEL FILTERS	69
P570 REMOVE OR INSTALL PROPELLER SYSTEM OIL FILTERS	69
L298 INSPECT ENGINE CONTROLS	67
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	67
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	67
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	67
L301 INSPECT ENGINE PLUMBING	64
N423 ADJUST NEGATIVE TORQUE SIGNAL (NTS) SYSTEMS	64
P563 REMOVE OR INSTALL PITCH LOCK REGULATORS	64
P567 REMOVE OR INSTALL PROPELLER LINKAGE ROD ENDS	64
P582 REWORK PROPELLER BLADE NICKS, BURRS, OR SCRATCHES	62
P564 REMOVE OR INSTALL PROPELLER ANTI-ICING AFTERBODIES	59
P585 RIG MECHANICAL LINKAGES FROM PROPELLER GOVERNOR CONTROLS TO COORDINATORS	59
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	59
P521 ADJUST COORDINATOR-TO-PROPELLER LINKAGES	59
L378 REMOVE OR INSTALL TORQUE INDICATING SYSTEM PICKUPS	59
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	56
G185 REMOVE OR INSTALL ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEM COMPONENTS	51
L371 REMOVE OR INSTALL REDUCTION GEARBOX ASSEMBLY COMPONENTS	51

TABLE IIc (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-130	85%
HC-130	18%
HH-53	18%
HH-3	13%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-56	97%
GTC-85-71/71A	28%
T-58	13%
T-64	13%
GTC-85-70/70A	10%

54H60 PROPELLER	85%
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TABLE III  
FLIGHTLINE JET ENGINE MAINTENANCE PERSONNEL CLUSTER  
(GRP332)

TASKS	PERCENT MEMBERS PERFORMING (N=699)
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	91
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	90
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	89
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	89
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	87
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	83
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	82
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	82
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	82
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	82
L393 SERVICE ENGINE OIL SYSTEMS	82
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	80
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	80
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	79
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	79
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	79
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	79
L301 INSPECT ENGINE PLUMBING	78
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	78
L286 ADJUST OPERATING AIRCRAFT ENGINES	75
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	72
G171 ISOLATE MALFUNCTIONS IN ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEMS	70
G162 ATTACH ENGINES TO AIRCRAFT INSTALLATION OR REMOVAL EQUIPMENT, SUCH AS SELF-PROPELLED CRANES	70
L394 SERVICE STARTER UNITS	69
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	68
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	67
L288 BLEND INLET BLADES	67
L318 ISOLATE MALFUNCTIONS IN ENGINE EXHAUST GAS TEMPERATURE (EGT) SYSTEMS	66
L299 INSPECT ENGINE EXHAUST CONES	66
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	65
G815 REMOVE OR INSTALL ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEM COMPONENTS	65
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	65
G159 ALIGN INSTALLED ENGINES	62
L297 INSPECT COMPRESSORS	61
G160 ANALYZE ENGINE OPERATION DATA DURING TRIM PAD RUNS	61
G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	61
G164 DEBRIEF FLIGHT CREWS OR GROUND CREWS TO DETERMINE ENGINE MALFUNCTIONS	57

TABLE III (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

K-135	28%
B-52	19%
F-4	19%
C-141	17%
F-15	12%
T-38	12%
C-130	11%
C-5A	10%
T-39	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-57	26%
TF-33	26%
J-79	20%
F-100	14%
J-85	11%

TABLE IIIa  
FLIGHTLINE JET ENGINE MAINTENANCE SPECIALISTS  
(GRP475)

TASKS	PERCENT MEMBERS RESPONDING (N=540)
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	95
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	94
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	94
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	93
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	91
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	91
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	90
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	90
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	90
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	89
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	87
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	86
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	86
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	86
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	85
L393 SERVICE ENGINE OIL SYSTEMS	85
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	84
G182 PREPARE AIRCRAFT FOR ENGINE REMOVALS OR INSTALLATIONS	83
L301 INSPECT ENGINE PLUMBING	82
L286 ADJUST OPERATING AIRCRAFT ENGINES	81
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	80
L397 TRANSPORT ENGINES TO WORK SECTIONS	77
G171 ISOLATE MALFUNCTIONS IN ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEMS	77
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	76
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	75
L318 ISOLATE MALFUNCTIONS IN ENGINE EXHAUST GAS TEMPERATURE (EGT) SYSTEMS	75
L316 ISOLATE MALFUNCTIONS IN ENGINE BLEED AIR SYSTEMS	74
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	74
L394 SERVICE STARTER UNITS	74
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	73
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	73
G162 ATTACH ENGINES TO AIRCRAFT INSTALLATION OR REMOVAL EQUIPMENT, SUCH AS SELF-PROPELLED CRANES	73
L360 REMOVE OR INSTALL EGT SYSTEM COMPONENTS	72
L288 BLEND INLET BLADES	70
G159 ALIGN INSTALLED ENGINES	67
G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	65
L372 REMOVE OR INSTALL RPM INDICATOR SYSTEM COMPONENTS	59
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	56
G187 REMOVE OR INSTALL LINE REPLACEABLE UNITS (LRU) ON ENGINES	53

TABLE IIIa (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

KC-135	32%
B-52	23%
F-4	20%
C-141	18%
C-130	13%
T-39	12%
EC-135	11%
T-38	11%
C-5A	11%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-57	30%
TF-33	28%
J-79	20%
J-60	10%
J-85	10%

TABLE IIIb  
JET PHASE DOCK SPECIALISTS  
(GRP621)

TASKS	PERCENT MEMBERS PERFORMING (N=40)
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	97
L394 SERVICE STARTER UNITS	95
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	95
L301 INSPECT ENGINE PLUMBING	92
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	90
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	88
L299 INSPECT ENGINE EXHAUST CONES	88
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	88
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	85
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	85
G179 PERFORM PHASE INSPECTIONS ON INSTALLED ENGINES	82
L393 SERVICE ENGINE OIL SYSTEMS	82
G181 POSITION MAINTENANCE STANDS FOR ENGINE REMOVALS OR INSTALLATIONS	82
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	82
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	80
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	80
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	77
G186 REMOVE OR INSTALL ENGINES IN AIRCRAFT	77
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	77
L343 PLACE PROTECTIVE COVERS ON ENGINES	77
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	77
G166 INSPECT COWLINGS FOR DAMAGE	72
G162 ATTACH ENGINES TO AIRCRAFT INSTALLATION OR REMOVAL EQUIPMENT, SUCH AS SELF-PROPELLED CRANES	72
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	70
L357 REMOVE OR INSTALL ENGINE HYDRAULIC SYSTEM COMPONENTS	70
L300 INSPECT ENGINE OR ACCESSORY SPLINES	67
L288 BLEND INLET BLADES	67
L298 INSPECT ENGINE CONTROLS	65
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	65
L302 INSPECT ENGINE TRAILERS OR STANDS	63
A6 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL OTHER THEN AFSC 426X2/426X3	63
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	60
B54 SUPERVISE APPRENTICE JET ENGINE MECHANICS (AFSC 42632)	60
F146 INSPECT ENGINES OR ASSOCIATED EQUIPMENT FOR CORROSION CONTROL	57
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	57
G192 RIG ENGINE THROTTLE SYSTEMS TO FIREWALL	57
L377 REMOVE OR INSTALL THRUST REVERSER SYSTEM COMPONENTS	55
L297 INSPECT COMPRESSORS	52



TABLE IIIb (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-141	48%
KC-135	25%
C-5A	23%
B-52	18%
T-39	18%
C-130	18%
C-135	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

TF-33	60%
J-57	25%
TF-39	18%
J-60	13%
J-79	13%
T-56	10%
T-58	10%

TABLE IIIc  
TRIM PAD SPECIALISTS  
(GRP519)

TASKS	PERCENT MEMBERS PERFORMING (N=29)
L310 INSPECT TRIM PAD FACILITIES HAVING NOISE SUPPRESSORS	97
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	97
G160 ANALYZE ENGINE OPERATION DATA DURING TRIM PAD RUNS	93
L340 OPERATE AIRCRAFT NOISE SUPPRESSORS	93
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	93
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	93
L345 READ OR RECORD ENGINE OPERATION DATA	90
G180 PLUG OR CAP LINES OR OPENINGS ON TRIM PAD FACILITIES	90
L314 ISOLATE MALFUNCTIONS IN ENGINE AFTERBURNER SYSTEMS	90
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	90
G178 PERFORM OPERATIONAL CHECKS ON INSTALLED ENGINES OR RELATED SYSTEMS	86
L338 MAINTAIN AIRCRAFT NOISE SUPPRESSORS	86
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	86
G183 REMOVE OR INSTALL AIRCRAFT ON TRIM PADS HAVING NOISE SUPPRESSORS	83
L286 ADJUST OPERATING AIRCRAFT ENGINES	79
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	79
L318 ISOLATE MALFUNCTIONS IN ENGINE EXHAUST GAS TEMPERATURE (EGT) SYSTEMS	79
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	79
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	79
L333 ISOLATE MALFUNCTIONS IN ENGINE VARIABLE NOZZLE SYSTEMS	79
L393 SERVICE ENGINE OIL SYSTEMS	76
G163 COMPUTE ENGINE THRUST OR EFFICIENCY ON TRIM PADS	72
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	72
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	72
L322 ISOLATE MALFUNCTIONS IN ENGINE INLET GUIDE VANE (IGV) SYSTEMS	72
L316 ISOLATE MALFUNCTIONS IN ENGINE BLEED AIR SYSTEMS	72
L343 PLACE PROTECTIVE COVERS ON ENGINES	69
G187 REMOVE OR INSTALL LINE REPLACEABLE UNITS (LRU) ON ENGINES	66
M399 GROUND AIRCRAFT	66
L297 INSPECT COMPRESSORS	66
L301 INSPECT ENGINE PLUMBING	66
L315 ISOLATE MALFUNCTIONS IN ENGINE ANTI-ICING SYSTEMS	66
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	66
G171 ISOLATE MALFUNCTIONS IN ENGINE-TO-AIRCRAFT THROTTLE RIGGING SYSTEMS	62
L294 INSPECT AFTERBURNERS	59
G172 ISOLATE MALFUNCTIONS IN OVERSPEED SYSTEMS	59
L307 INSPECT REMOTE TRIM KITS	55
L306 INSPECT NOZZLE POSITION TRANSMITTERS	55
G175 MAINTAIN NOZZLE POSITION TRANSMITTERS	52

TABLE IIIc (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-38	41%
F-15	35%
T-37	31%
F-5	24%
F-4	17%
F-16	14%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

F-100	55%
J-85	31%
J-69	24%
J-79	14%

TABLE IV  
TEST CELL PERSONNEL  
(GRP297)

TASKS	PERCENT MEMBERS PERFORMING (N=152)
J275 REMOVE OR INSTALL ENGINES FROM TEST CELLS	99
J267 INSPECT ENGINES BEFORE OR AFTER INSTALLATION IN TEST CELLS	95
J262 ANALYZE ENGINE OPERATION DATA DURING TEST CELL RUNS	94
J272 MAINTAIN TEST CELLS	93
J274 PRESERVE OR DEPRESERVE ENGINE FUEL SYSTEMS	93
L393 SERVICE ENGINE OIL SYSTEMS	93
L395 TAKE SPECTROMETRIC OIL ANALYSIS SAMPLES	92
L345 READ OR RECORD ENGINE OPERATION DATA	88
J273 OPERATE ENGINES IN TEST CELLS	88
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	88
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	86
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	85
J268 INSPECT FLEXURE PLATES OR RESTRAINT ASSEMBLIES ON TEST CELLS	84
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	83
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	82
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	80
L325 ISOLATE MALFUNCTIONS IN ENGINE OIL SYSTEMS	80
L321 ISOLATE MALFUNCTIONS IN ENGINE IGNITION SYSTEMS	79
L319 ISOLATE MALFUNCTIONS IN ENGINE FUEL SYSTEMS	78
J266 COMPUTE ENGINE THRUST OR EFFICIENCY ON TEST CELLS	77
J271 INSTALL TEST CELL ADAPTER KITS	77
E131 MAKE ENTRIES ON OIL ANALYSIS REQUEST FORMS (DD FORM 2026)	77
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	74
L315 ISOLATE MALFUNCTIONS IN ENGINE ANTI-ICING SYSTEMS	74
L327 ISOLATE MALFUNCTIONS IN ENGINE RPM INDICATING SYSTEMS	74
L318 ISOLATE MALFUNCTIONS IN ENGINE EXHAUST GAS TEMPERATURE (EGT) SYSTEMS	74
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	74
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	73
L328 ISOLATE MALFUNCTIONS IN ENGINE STARTER SYSTEMS	72
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	71
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	71
L291 CLEAN FACILITIES	68
L316 ISOLATE MALFUNCTIONS IN ENGINE BLEED AIR SYSTEMS	68
J270 INSPECT TEST CELLS NOT EQUIPPED WITH NOISE SUPPRESSORS	67
L383 REMOVE OR INSTALL VIBRATION SYSTEM COMPONENTS	65
L311 INSPECT VIBRATION ANALYZERS	63
J263 ASSEMBLE OR DISASSEMBLE PORTABLE AIRCRAFT ENGINE TEST STANDS	59
L286 ADJUST OPERATING AIRCRAFT ENGINES	56
B40 DIRECT TEST CELL FUNCTIONS	56

TABLE IV (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

KC-135	19%
F-4	18%
B-52	15%
T-38	15%
C-130	11%
C-141	10%
F-15	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-57	23%
J-79	19%
TF-33	17%
J-85	15%
TF-30	13%
F-100	12%

TABLE V  
IN-SHOP ENGINE MAINTENANCE PERSONNEL CLUSTER  
(GRP149)

TASKS	PERCENT MEMBERS PERFORMING (N=842)
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	87
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	87
H238 REMOVE OR INSTALL ENGINE BEARINGS	85
H247 REMOVE OR INSTALL TURBINE ROTORS	84
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	82
H245 REMOVE OR INSTALL TURBINE NOZZLES	80
H243 REMOVE OR INSTALL QEC KITS	79
H210 INSPECT TURBINE NOZZLES	78
H229 PREPARE ENGINES FOR SHIPMENT	77
H211 INSPECT TURBINE ROTORS	77
L343 PLACE PROTECTIVE COVERS ON ENGINES	77
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	76
H239 REMOVE OR INSTALL ENGINE INTERNAL OIL SEALS	73
L296 INSPECT COMBUSTION CHAMBERS	73
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	73
L301 INSPECT ENGINE PLUMBING	72
L346 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLIES	72
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	71
H237 REMOVE OR INSTALL COMPRESSORS	71
H203 INSPECT ENGINE OIL SEALS	71
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	71
L297 INSPECT COMPRESSORS	70
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	69
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	68
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	68
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	67
H199 BLEND COMPRESSOR OR TURBINE BLADES	64
H225 PACK OR UNPACK ENGINES IN SHIPPING CONTAINERS	64
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	64
L357 REMOVE OR INSTALL ENGINE HYDRAULIC SYSTEM COMPONENTS	61
L364 REMOVE OR INSTALL INLET GUIDE VANE (IGV) SYSTEM COMPONENTS	60
L360 REMOVE OR INSTALL EXHAUST GAS TEMPERATURE (EGT) SYSTEM COMPONENTS	60
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	60
H206 INSPECT FUEL MANIFOLDS OR NOZZLES	59
L299 INSPECT ENGINE EXHAUST CONES	59
H235 REMOVE OR INSTALL COMBINING GEARBOXES	58
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	58
H194 APPLY PROTECTIVE COATINGS TO ENGINES OR ENGINE PARTS	55
L290 CLEAN ENGINES	54
H201 INSPECT ENGINE BEARINGS	50

TABLE V (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

KC-135	18%
B-52	15%
F-4	14%
C-130	13%
C-141	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-57	20%
J-79	17%
TF-33	16%
F-100	12%
T-56	12%

TABLE Va  
ENGINE BUILD-UP OR TEAR DOWN SPECIALISTS  
(GRP448)

TASKS	PERCENT MEMBERS PERFORMING (N=627)
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	94
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	93
H238 REMOVE OR INSTALL ENGINE BEARINGS	93
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	92
H247 REMOVE OR INSTALL TURBINE ROTORS	91
H245 REMOVE OR INSTALL TURBINE NOZZLES	87
L296 INSPECT COMBUSTION CHAMBERS	86
H210 INSPECT TURBINE NOZZLES	86
H211 INSPECT TURBINE ROTORS	86
L301 INSPECT ENGINE PLUMBING	85
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	84
L297 INSPECT COMPRESSOR	84
H243 REMOVE OR INSTALL QEC KITS	83
H229 PREPARE ENGINES FOR SHIPMENT	83
L363 REMOVE OR INSTALL IGNITION SYSTEM COMPONENTS	83
H239 REMOVE OR INSTALL ENGINE INTERNAL OIL SEALS	83
L343 PLACE PROTECTIVE COVERS ON ENGINES	82
L346 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLIES	81
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	80
H203 INSPECT ENGINE OIL SEALS	79
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	79
H237 REMOVE OR INSTALL COMPRESSORS	78
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	78
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	78
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	76
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	75
L299 INSPECT ENGINE EXHAUST CONES	74
H199 BLEND COMPRESSOR OR TURBINE BLADES	73
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	72
L360 REMOVE OR INSTALL EXHAUST GAS TEMPERATURE (EGT) SYSTEM COMPONENTS	71
L364 REMOVE OR INSTALL INLET GUIDE VANE (IGV) SYSTEM COMPONENTS	71
L300 INSPECT ENGINE OR ACCESSORY SPLINES	70
L291 CLEAN FACILITIES	70
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	69
H225 PACK OR UNPACK ENGINES IN SHIPPING CONTAINERS	69
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	66
L288 BLEND INLET BLADES	65
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	61
H201 INSPECT ENGINE BEARINGS	55
H242 REMOVE OR INSTALL OIL METERING JETS	54



TABLE Va (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

KC-135	20%
B-52	16%
F-4	14%
C-130	12%
C-141	11%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-57	22%
TF-33	18%
J-79	16%
T-56	11%
F-100	10%

TABLE Vb  
TURBOPROP QEC KIT SPECIALISTS  
(GRP487)

TASKS	PERCENT MEMBERS PERFORMING (N=29)
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	93
L371 REMOVE OR INSTALL REDUCTION GEARBOX ASSEMBLY COMPONENTS	93
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	90
L379 REMOVE OR INSTALL TORQUEMETER ASSEMBLY COMPONENTS	90
L290 CLEAN ENGINES	86
H243 REMOVE OR INSTALL QEC KITS	83
L367 REMOVE OR INSTALL NEGATIVE TORQUE SYSTEM (NTS) BRACKETS	83
L343 PLACE PROTECTIVE COVERS ON ENGINES	79
L394 SERVICE STARTER UNITS	79
H244 REMOVE OR INSTALL TORQUE SHAFTS	79
L357 REMOVE OR INSTALL ENGINE HYDRAULIC SYSTEM COMPONENTS	76
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	72
L376 REMOVE OR INSTALL TEMPERATURE DATUM SYSTEM COMPONENTS	72
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	72
L378 REMOVE OR INSTALL TORQUE INDICATING SYSTEM PICKUPS	72
L393 SERVICE ENGINE OIL SYSTEMS	72
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	72
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	69
H208 INSPECT QUICK ENGINE CHANGE (QEC) KITS	66
H225 PACK OR UNPACK ENGINES IN SHIPPING CONTAINERS	66
H194 APPLY PROTECTIVE COATINGS TO ENGINES OR ENGINE PARTS	66
L293 DRAIN FUEL FILTERS	62
L369 REMOVE OR INSTALL PNEUMATIC STARTER UNITS	62
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	62
L291 CLEAN FACILITIES	59
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	59
L289 CLEAN ENGINE PARTS USING CLEANERS OTHER THAN ULTRASONIC CLEANERS	55
H235 REMOVE OR INSTALL COMBINING GEARBOXES	55
L380 REMOVE OR INSTALL TURBINE INLET TEMPERATURE (TIT) SYSTEM COMPONENTS	55
H229 PREPARE ENGINES FOR SHIPMENT	55
L349 REMOVE OR INSTALL BLEED AIR SYSTEM COMPONENTS	55
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	55
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	55
L346 REMOVE OR INSTALL ACCESSORY GEAR BOX ASSEMBLIES	52
G166 INSPECT COWLINGS FOR DAMAGE	52
H223 MARK ENGINE CONTAINERS	52

TABLE Vb (CONTINUED)  
SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-130	86%
HC-130	17%
AC-130	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-56	86%
54H60 PROPELLER	17%

TABLE Vc

SMALL GAS TURBINE REPAIR AND TESTING SPECIALISTS  
(GRP458)

TASKS	PERCENT MEMBERS PERFORMING (N=25)
K276 ADJUST SMALL GAS TURBINES (SGTs)	100
K278 ASSEMBLE OR DISASSEMBLE SGT	100
K277 ANALYZE SGT ENGINE OPERATION DATA DURING TEST STAND RUNS	92
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	88
K279 INSPECT SGT ENGINE PORTABLE TEST STANDS	88
H238 REMOVE OR INSTALL ENGINE BEARINGS	88
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	88
K283 REMOVE OR INSTALL SGT ENGINES ON PORTABLE TEST STANDS	88
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	88
K284 SERVICE SGT PORTABLE TEST STANDS	88
H229 PREPARE ENGINES FOR SHIPMENT	88
K280 OPERATE SGT ENGINES ON TEST STANDS	84
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	84
H201 INSPECT ENGINE BEARINGS	84
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	80
H210 INSPECT TURBINE NOZZLES	80
L393 SERVICE ENGINE OIL SYSTEMS	80
H225 PACK OR UNPACK ENGINES IN SHIPPING CONTAINERS	80
H239 REMOVE OR INSTALL ENGINE INTERNAL OIL SEALS	76
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	76
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	72
K281 REMOVE OR INSTALL AEROSPACE GROUND EQUIPMENT (AGE) SGT ENGINES	72
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	72
J262 ANALYZE ENGINE OPERATION DATA DURING TEST CELL RUNS	72
L301 INSPECT ENGINE PLUMBING	72
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	68
J275 REMOVE OR INSTALL ENGINES FROM TEST CELLS	68
L302 INSPECT ENGINE TRAILERS OR STANDS	68
L347 REMOVE OR INSTALL ACCESSORY GEARBOX ASSEMBLY COMPONENTS	68
K282 REMOVE OR INSTALL IMPELLER SHAFTS	68
L290 CLEAN ENGINES	68
H211 INSPECT TURBINE ROTORS	68
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	68
H247 REMOVE OR INSTALL TURBINE ROTORS	64
H245 REMOVE OR INSTALL TURBINE NOZZLES	64
J273 OPERATE ENGINES IN TEST CELLS	60
L345 READ OR RECORD ENGINE OPERATION DATA	52

TABLE Vc (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-141	28%
C-130	20%
C-5A	20%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

GTC-85-70/70A	60%
GTCP-85-387	56%
GTCP-85-106	36%
GTCP-85-71/71A	20%
GTCP-165-1	16%
JFS-109-1	12%
T-56	12%
T-62	12%

TABLE Vd  
JET QEC KIT SPECIALISTS  
(GRP374)

TASKS	PERCENT MEMBERS PERFORMING (N=13)
H243 REMOVE OR INSTALL QEC KITS	100
L375 REMOVE OR INSTALL TACHOMETER GENERATORS	100
L351 REMOVE OR INSTALL CONSTANT SPEED DRIVE (CSD) SYSTEM COMPONENTS	92
L357 REMOVE OR INSTALL ENGINE HYDRAULIC SYSTEM COMPONENTS	85
L396 TRANSFER ENGINES TO TRANSPORTATION DOLLIES	85
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	85
L397 TRANSPORT ENGINES TO WORK SECTIONS	85
L356 REMOVE OR INSTALL ENGINE FUEL SYSTEM COMPONENTS	85
L353 REMOVE OR INSTALL ENGINE ANTI-ICING SYSTEM COMPONENTS	77
L358 REMOVE OR INSTALL ENGINE OIL SYSTEM COMPONENTS	77
H208 INSPECT QUICK ENGINE CHANGE (QEC) KITS	77
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	77
L393 SERVICE ENGINE OIL SYSTEMS	69
L374 REMOVE OR INSTALL STARTER SYSTEM COMPONENTS	69
L391 SEAL ENGINE OPENINGS	69
L343 PLACE PROTECTIVE COVERS ON ENGINES	62
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	62
H229 PREPARE ENGINES FOR SHIPMENT	62
L291 CLEAN FACILITIES	54
L373 REMOVE OR INSTALL SAFETY DEVICES ON ENGINE COMPONENTS	54
L370 REMOVE OR INSTALL PORTIONS OF COWLING, NACELLES, ACCESS DOORS, OR PANELS	54
H194 APPLY PROTECTIVE COATINGS TO ENGINES OR ENGINE PARTS	54
L301 INSPECT ENGINE PLUMBING	54
L293 DRAIN FUEL FILTERS	54
L302 INSPECT ENGINE TRAILERS OR STANDS	54
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	54
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	46
H230 PREPARE QEC KITS FOR STORAGE	46
H206 INSPECT FUEL MANIFOLDS OR NOZZLES	46
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	46
H199 BLEND COMPRESSOR OR TURBINE BLADES	46
L369 REMOVE OR INSTALL PNEUMATIC STARTER UNITS	38
L394 SERVICE STARTER UNITS	38
F147 INSPECT QUICK ENGINE CHANGE (QEC) KIT FORMS	38
H203 INSPECT ENGINE OIL SEALS	38
L289 CLEAN ENGINE PARTS USING CLEANERS OTHER THAN ULTRASONIC CLEANERS	38
L372 REMOVE OR INSTALL RPM INDICATOR SYSTEM COMPONENTS	31

TABLE Vd (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-141	23%
A-7D	23%
C-5A	15%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

TF-33	62%
TF-41	23%
TF-39	15%
J-79	15%

TABLE VI  
PROPELLER SHOP MAINTENANCE PERSONNEL  
(GRP161)

TASKS	PERCENT MEMBERS PERFORMING (N=46)
0470 INSTALL PROPELLER BLADES IN HUBS	98
P572 REMOVE OR INSTALL PUMP HOUSINGS	96
P579 REMOVE OR INSTALL VALVE HOUSINGS	93
0506 REMOVE OR INSTALL BRUSH BLOCK ASSEMBLIES	93
P566 REMOVE OR INSTALL PROPELLER BRUSH BLOCKS	91
P565 REMOVE OR INSTALL PROPELLER BLADES ON HUBS	91
0507 REMOVE OR INSTALL BULKHEAD ASSEMBLIES	91
0471 INSTALL PROPELLER HUB PERFORMED PACKING	91
0479 PERFORM EXTERNAL LEAKAGE CHECKS OF PROPELLER ASSEMBLIES	91
0466 INSTALL DOME PREFORMED PACKINGS	91
0508 REMOVE OR INSTALL DEICER CONTACT RING ASSEMBLIES	89
0503 REMOVE OR INSTALL BLADE DEICING BRUSH BLOCK ASSEMBLY COMPONENTS	87
P563 REMOVE OR INSTALL PITCH LOCK REGULATORS	87
0482 PERFORM INTERNAL LEAKAGE CHECKS OF PROPELLER ASSEMBLIES	87
P564 REMOVE OR INSTALL PROPELLER ANTI-ICING AFTERBODIES	87
0478 PERFORM BLADE ANGLE CHECKS USING HYDRAULIC PROPELLER TESTERS	87
0513 REMOVE OR INSTALL PROPELLERS ON ASSEMBLY STANDS	85
P538 INSPECT PROPELLERS OR RELATED COMPONENTS	85
0451 ASSEMBLE OR DISASSEMBLE PUMP HOUSINGS	83
0504 REMOVE OR INSTALL BLADE PACKINGS	80
0505 REMOVE OR INSTALL BLADE SLIP RING ASSEMBLIES	80
0481 PERFORM FEATHER PRESSURE CHECKS	80
0448 ASSEMBLE OR DISASSEMBLE DOME ASSEMBLIES	80
0480 PERFORM FEATHER ANGLE SETTING CHECKS	80
P582 REWORK PROPELLER BLADE NICKS, BURRS, OR SCRATCHES	80
P571 REMOVE OR INSTALL PULSE GENERATORS	78
0461 CRATE OR UNCRATE PROPELLERS	76
P532 CLEAN PROPELLERS OR RELATED COMPONENTS OTHER THAN OIL FILTERS	74
0512 REMOVE OR INSTALL PITCH LOCK REGULATOR COMPONENTS	74
P581 REPAIR CUFFS, AFTERBODIES, OR SPINNERS	74
0483 PERFORM LOW PITCH STOP LEVER ASSEMBLY TESTS	74
0447 ASSEMBLE OR DISASSEMBLE CONTROL AND BRUSH PAD ASSEMBLIES	74
P529 ADJUST PULSE GENERATOR CLEARANCES	72
P586 RIG VALVE HOUSINGS	72
0463 INSTALL BLADE GEAR SEGMENTS	70
0515 REMOVE OR INSTALL SPINNER CENTER SECTIONS	65
0502 REMOVE OR INSTALL BLADE BEARING ASSEMBLIES	63
0452 ASSEMBLE OR DISASSEMBLE VALVE HOUSINGS	63
0455 BALANCE PROPELLERS	57



TABLE VI (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

C-130	76%
HC-130	26%
WC-130	20%
AC-130	17%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-56	46%
54H60 PROPELLER	96%

TABLE VII  
BALANCE SHOP SPECIALISTS  
(GRP212)

TASKS	PERCENT MEMBERS PERFORMING (N=27)
I251 DYNAMICALLY BALANCE TURBINES OR COMPRESSORS	96
I249 ASSEMBLE COMPRESSOR UNITS	96
I250 DISASSEMBLE COMPRESSOR UNITS	96
I255 MEASURE BLADE TIP RADII	96
I256 PERFORM PERMANENT BALANCE CORRECTIONS ON TURBINE OR COMPRESSOR ROTORS	93
I261 WEIGH TURBINE BLADES OR COMPRESSOR ROTOR BLADES	93
I260 TEST FOR ROTOR BALANCE	89
I259 STATIC BALANCE BLADED DISC ASSEMBLIES	89
H236 REMOVE OR INSTALL COMPRESSOR BLADES	85
I254 MAINTAIN BALANCE SHOP EQUIPMENT	85
I257 PERFORM RUNOUT CHECKS ON ROTOR HUBS	85
H246 REMOVE OR INSTALL TURBINE ROTOR BLADES	85
I253 INSPECT BALANCE SHOP EQUIPMENT	81
I258 PERFORM RUNOUT CHECKS OR WAX CHECKS ON COMPRESSOR ROTOR CASINGS	81
H211 INSPECT TURBINE ROTORS	81
H199 BLEND COMPRESSOR OR TURBINE BLADES	81
H248 STATIC BALANCE BLADES	74
I252 GRIND WEBS OF COMPRESSOR WHEELS OR TURBINE ROTORS	63
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	63
L297 INSPECT COMPRESSORS	59
L295 INSPECT BLADED DISC ASSEMBLIES	52
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	48
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	44
H194 APPLY PROTECTIVE COATINGS TO ENGINES OR ENGINE PARTS	41
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	33
H217 MAINTAIN ENGINE ACCESSORY SHOP EQUIPMENT	33
L288 BLEND INLET BLADES	33
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	30
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	30

TABLE VII (CONTINUED)  
SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

T-38	82%
T-37	67%
F-5	26%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-85	82%
J-69	56%

TABLE VIII  
AFTERBURNER MECHANICS  
(GRP169)

TASKS	PERCENT MEMBERS PERFORMING (N=22)
H195 ASSEMBLE OR DISASSEMBLE AFTERBURNERS	91
L294 INSPECT AFTERBURNERS	91
L285 ADJUST AFTERBURNER NOZZLES	77
H224 PACK OR UNPACK AFTERBURNERS IN SHIPPING CONTAINERS	77
L348 REMOVE OR INSTALL AFTERBURNER SYSTEM COMPONENTS	64
H214 MAINTAIN AFTERBURNER REPAIR EQUIPMENT	64
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	64
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	50
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	45
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	45
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	45
L385 RIG AFTERBURNER SYSTEMS	41
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	36
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	36
L382 REMOVE OR INSTALL VARIABLE NOZZLE SYSTEM COMPONENTS	27
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	27
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	27
H234 REMOVE OR INSTALL AFTERBURNERS	27
A11 DEVELOP WORK METHODS OR PROCEDURES	27

TABLE VIII (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

F-4	23%
F-111	18%
F-15	14%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-79	27%
F-100	18%

TABLE IX  
ENGINE ACCESSORY REPAIRMEN  
(GRP200)

TASKS	PERCENT MEMBERS PERFORMING (N=25)
H201 INSPECT ENGINE BEARINGS	92
H206 INSPECT FUEL MANIFOLDS OR NOZZLES	88
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	88
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	84
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	80
H215 MAINTAIN BEARING SERVICING EQUIPMENT	76
H226 PERFORM OPERATIONAL CHECKS OF FUEL MANIFOLDS	68
H219 MAINTAIN FUEL MANIFOLD TEST STANDS	68
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	68
H217 MAINTAIN ENGINE ACCESSORY SHOP EQUIPMENT	64
H205 INSPECT FUEL MANIFOLD TEST STANDS	64
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	56
H233 PRESSURE CHECK ENGINE CARBON SEALS	52
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	52
H218 MAINTAIN ENGINE TRAILERS OR STANDS	48
L289 CLEAN ENGINE PARTS USING CLEANERS OTHER THAN ULTRASONIC CLEANERS	48
H200 CLEAN ENGINE PARTS USING ULTRASONIC CLEANERS	44
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	44
E132 MAKE ENTRIES ON PAPERWORK FOR BENCH CHECK ITEMS	44
L292 CONNECT OR DISCONNECT TEST EQUIPMENT	44
L291 CLEAN FACILITIES	36
H197 BENCHCHECK ENGINE BLEED VALVES	36
L302 INSPECT ENGINE TRAILERS OR STANDS	32
F146 INSPECT ENGINES OR ASSOCIATED EQUIPMENT FOR CORROSION CONTROL	32
H203 INSPECT ENGINE OIL SEALS	32
L299 INSPECT ENGINE EXHAUST CONES	32
H222 MAINTAIN ULTRASONIC CLEANERS	32
L355 REMOVE OR INSTALL ENGINE EXHAUST CONES	28
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	28
E138 MAKE ENTRIES ON SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244)	24
L361 REMOVE OR INSTALL FUEL MANIFOLDS OR FUEL NOZZLES	24
H212 INSPECT ULTRASONIC CLEANERS	24
E109 CUT STENCILS	24

TABLE IX (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

KC-135	56%
B-52	52%
T-38	16%
F-4	12%
C-135	12%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-57	48%
TF-33	24%
GTC-85-70/70A	16%
J-85	16%
GTCP-85-397	12%
J-69	12%

TABLE X  
SMALL GAS TURBINE MECHANICS  
(GRP176)

TASKS	PERCENT MEMBERS PERFORMING (N=35)
K283 REMOVE OR INSTALL SGT ENGINES ON PORTABLE TEST STANDS	97
K278 ASSEMBLE OR DISASSEMBLE SGTs	97
K280 OPERATE SGT ENGINES ON TEST STANDS	94
K279 INSPECT SGT ENGINE PORTABLE TEST STANDS	94
K284 SERVICE SGT PORTABLE TEST STANDS	91
K276 ADJUST SMALL GAS TURBINES (SGT)	91
K277 ANALYZE SGT ENGINE OPERATION DATA DURING TEST STAND RUNS	89
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	80
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	66
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	66
K282 REMOVE OR INSTALL IMPELLER SHAFTS	60
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	54
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	54
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	51
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	51
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	49
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	46
K281 REMOVE OR INSTALL AEROSPACE GROUND EQUIPMENT (AGE) SGT ENGINES	40
F146 INSPECT ENGINES OR ASSOCIATED EQUIPMENT FOR CORROSION CONTROL	37
H218 MAINTAIN ENGINE TRAILERS OR STANDS	34
B33 DIRECT ENGINE ASSEMBLY OR DISASSEMBLY FUNCTIONS	31
E109 CUT STENCILS	31
L302 INSPECT ENGINE TRAILERS OR STANDS	29
D89 CONDUCT OJT	29
B40 DIRECT TEST CELL FUNCTIONS	29
H229 PREPARE ENGINES FOR SHIPMENT	29
A9 DETERMINE WORK PRIORITIES	29
E124 MAINTAIN TECHNICAL ORDER PUBLICATION FILES	29
H225 PACK OR UNPACK ENGINES IN SHIPPING CONTAINERS	29
B54 SUPERVISE APPRENTICE JET ENGINE MECHANICS (AFSC 42732)	29
F150 PERFORM ACTIVITY INSPECTIONS	26
H196 ASSEMBLE OR DISASSEMBLE TURBINE UNITS	26
E132 MAKE ENTRIES ON PAPERWORK FOR BENCH CHECK ITEMS	26



**TABLE X (CONTINUED)**

**SELECTED BACKGROUND INFORMATION**

**AIRCRAFT MAINTAINED**  
**(10 PERCENT OR MORE RESPONDING)**

C-130	26%
F-4	17%
F-15	17%
C-141	11%

**ENGINES/PROPELLERS MAINTAINED**  
**(10 PERCENT OR MORE RESPONDING)**

GTCP-85-397	49%
GTC-85-71/71A	31%
GTC-85-70/70A	26%
J-79	23%
JFS-190-1	14%
GTCP-85-106	11%

TABLE XI  
HEADQUARTERS STAFF PERSONNEL  
(GRP450)

TASKS	PERCENT MEMBERS PERFORMING (N=24)
B62 WRITE CORRESPONDENCE	100
C85 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	92
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	83
C74 EVALUATE REPORTS OF DEFICIENCIES	79
C77 EVALUATE SUGGESTIONS	71
A23 PREPARE STATUS REPORTS	67
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	67
A17 PLAN BRIEFINGS	63
C68 EVALUATE INSPECTION REPORTS OR PROCEDURES	58
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUB- ORDINATES	54
A4 COORDINATE SUPPLY ACTIVITIES WITH SUPPLY OR ENGINE MANAGERS	50
A11 DEVELOP WORK METHODS OR PROCEDURES	50
A13 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	50
C71 EVALUATE MAINTENANCE MANAGEMENT SYSTEMS OTHER THAN MMICS	46
A8 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	46
F156 REVIEW UNSATISFACTORY REPORTS (UR)	42
B28 CONDUCT STAFF MEETINGS	42
A6 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL OTHER THAN AFSC 426X2/426X3	38
E140 MAKE ENTRIES ON TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT REPORT AND REPLY FORMS (AFTO FORM 22)	38
C81 INVESTIGATE ACCIDENTS OR INCIDENTS	33
C63 ANALYZE WORKLOAD REQUIREMENTS	33
C64 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	33
A12 DRAFT BUDGET OR FINANCIAL REQUIREMENTS	33
C70 EVALUATE MAINTENANCE MANAGEMENT INFORMATION AND CONTROL SYSTEMS (MMICS)	29
C72 EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	29
F155 REVIEW CHANGES IN TECHNICAL ORDERS (TOs)	25
C65 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	25
C69 EVALUATE JOB DESCRIPTIONS	25
C75 EVALUATE SAFETY PROGRAMS	21
B38 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	21
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	21
C82 PREPARE APRs	21

TABLE XI (CONTINUED)  
SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

TABLE XII  
PROPULSION BRANCH MANAGEMENT PERSONNEL CLUSTER  
(GRP112)

TASKS	PERCENT MEMBERS PERFORMING (N=342)
C82 PREPARE APRs	89
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	88
B48 INTERVIEW NEWLY ASSIGNED PERSONNEL	84
A9 DETERMINE WORK PRIORITIES	83
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	83
C80 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	82
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	80
A25 SCHEDULE LEAVES OR PASSES	76
A21 PLAN WORK ASSIGNMENTS	73
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	70
A11 DEVELOP WORK METHODS OR PROCEDURES	69
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	69
A8 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	68
A14 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	66
C63 ANALYZE WORKLOAD REQUIREMENTS	65
C65 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	64
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	63
B62 WRITE CORRESPONDENCE	62
B57 SUPERVISE JET ENGINE MECHANICS (AFSC 42652)	61
A23 PREPARE STATUS REPORTS	61
C67 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	61
A6 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL OTHER THAN AFSC 426X2/426X3	61
C68 EVALUATE INSPECTION REPORTS OR PROCEDURES	61
A4 COORDINATE SUPPLY ACTIVITIES WITH SUPPLY OR ENGINE MANAGERS	58
D92 COUNSEL TRAINEES ON TRAINING PROGRESS	58
B58 SUPERVISE JET ENGINE TECHNICIANS (AFSC 42672)	58
D94 DETERMINE OJT TRAINING REQUIREMENTS	58
C79 EVALUATE WORK SCHEDULES	58
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	57
C72 EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	56
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	56
C70 EVALUATE MAINTENANCE MANAGEMENT INFORMATION AND CONTROL SYSTEMS (MMICS)	55
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	55
D87 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	54
C74 EVALUATE REPORTS OF DEFICIENCIES	52
D100 EVALUATE OJT TRAINEES	51
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	51
F149 OBSERVE IN-PROCESS MAINTENANCE	50

TABLE XII (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

KC-135	15%
F-4	12%
C-130	12%
B-52	11%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-57	18%
J-79	16%
TF-33	14%
GTC-85-70/70A	12%
F-100	12%
T-56	11%
GTCP-85-397	10%

TABLE XIIa  
GENERAL SUPERVISORY PERSONNEL  
(GRP240)

TASKS	PERCENT MEMBERS PERFORMING (N=278)
C82 PREPARE APRs	95
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	92
C80 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	91
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	89
B48 INTERVIEW NEWLY ASSIGNED PERSONNEL	88
A9 DETERMINE WORK PRIORITIES	86
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	86
A25 SCHEDULE LEAVES OR PASSES	82
A21 PLAN WORK ASSIGNMENTS	77
C65 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	75
A8 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	74
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	73
C63 ANALYZE WORKLOAD REQUIREMENTS	73
A11 DEVELOP WORK METHODS OR PROCEDURES	73
C67 EVALUATE INDIVIDUALS FOR PROMOTION, DEMOTION, OR RECLASSIFICATION	72
A14 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	71
C68 EVALUATE INSPECTION REPORTS OR PROCEDURES	71
B62 WRITE CORRESPONDENCE	68
B58 SUPERVISE JET ENGINE TECHNICIANS (AFSC 42672)	66
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	66
A23 PREPARE STATUS REPORTS	65
C79 EVALUATE WORK SCHEDULES	65
A6 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL OTHER THAN AFSC 426X2/426X3	65
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	64
D92 COUNSEL TRAINEES ON TRAINING PROGRESS	64
C72 EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	63
B57 SUPERVISE JET ENGINE MECHANICS (AFSC 42652)	62
A4 COORDINATE SUPPLY ACTIVITIES WITH SUPPLY OR ENGINE MANAGERS	62
D94 DETERMINE OJT TRAINING REQUIREMENTS	61
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	61
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	60
C74 EVALUATE REPORTS OF DEFICIENCIES	59
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	56
F149 OBSERVE IN-PROCESS MAINTENANCE	55
C66 EVALUATE DUE IN FROM MAINTENANCE (DIFM) REPORTS	55
A13 ESTABLISH ORGANIZATIONAL POLICIES, OFFICE INSTRUCTIONS (OI), OR STANDARD OPERATING PROCEDURES (SOP)	53

TABLE XIIa (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

F-4	13%
KC-135	13%
B-52	11%
C-130	10%
T-38	10%

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-79	17%
J-57	17%
F-100	13%
TF-33	13%
GTC-85-70/70A	12%
J-85	11%
GTCP-85-397	10%
T-56	10%

TABLE XIIb  
OJT PROGRAM MONITORS  
(GRP557)

TASKS	PERCENT MEMBERS PERFORMING (N=10)
B62 WRITE CORRESPONDENCE	100
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	100
D97 DIRECT OR IMPLEMENT OJT PROGRAMS	100
D92 COUNSEL TRAINEES ON TRAINING PROGRESS	90
C70 EVALUATE MAINTENANCE MANAGEMENT INFORMATION AND CONTROL SYSTEMS (MMICS)	90
D94 DETERMINE OJT TRAINING REQUIREMENTS	90
A23 PREPARE STATUS REPORTS	80
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	80
D89 CONDUCT OJT	80
C82 PREPARE APRs	80
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	80
B48 INTERVIEW NEWLY ASSIGNED PERSONNEL	70
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	70
A25 SCHEDULE LEAVES OR PASSES	70
D104 PLAN OJT	60
D91 CONDUCT TRAINING CONFERENCES OR BRIEFINGS	60
D99 ESTABLISH STUDY REFERENCE FILES	60
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUB- ORDINATES	60
B31 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	60
A14 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	60
B39 DIRECT PREPARATION OR MAINTENANCE OF RECORDS OR REPORTS	60
D86 ADMINISTER TESTS	60
A10 DEVELOP ORGANIZATIONAL CHARTS	60
C71 EVALUATE MAINTENANCE MANAGEMENT SYSTEMS OTHER THAN MMICS	50
D87 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	50
D100 EVALUATE OJT TRAINEES	50
B38 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	50
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	50
F155 REVIEW CHANGES IN TECHNICAL ORDERS (TOs)	50
D105 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	50
D98 DIRECT OR IMPLEMENT TRAINING PROGRAMS OTHER THAN OJT	40
E125 MAINTAIN TO OR STANDARD PUBLICATION READING FILES	40
A15 ESTABLISH PUBLICATION LIBRARIES	40



TABLE XIIb (CONTINUED)  
SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-75	10%
J-79	10%
TF-33	10%

TABLE XIII

QUALITY CONTROL TECHNICIANS  
(GRP320)

TASKS	PERCENT MEMBERS PERFORMING (N=61)
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	98
F155 REVIEW CHANGES IN TECHNICAL ORDERS (TOs)	97
F146 INSPECT ENGINES OR ASSOCIATED EQUIPMENT FOR CORROSION CONTROL	95
F149 OBSERVE IN-PROCESS MAINTENANCE	93
F150 PERFORM ACTIVITY INSPECTIONS	92
F153 PERFORM QUALITY VISUAL INSPECTIONS (QVI) OF ENGINES	90
F144 COORDINATE QUALITY CONTROL PROBLEMS WITH DEPUTY COMMANDER OF MAINTENANCE	82
F148 MAKE IN-PROCESS MAINTENANCE CORRECTIVE SUGGESTIONS	77
F151 PERFORM POST-INSTALLATION INSPECTIONS OF ENGINE BAYS	75
F156 REVIEW UNSATISFACTORY REPORTS (UR)	72
F147 INSPECT QUICK ENGINE CHANGE (QEC) KIT FORMS	70
F154 PERFORM SPECIAL MODIFICATION INSPECTIONS	70
F152 PERFORM PRE-INSTALLATION INSPECTIONS OF ENGINE BAYS	67
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	57
L302 INSPECT ENGINE TRAILERS OR STANDS	54
L297 INSPECT COMPRESSORS	52
C74 EVALUATE REPORTS OF DEFICIENCIES	52
F157 VERIFY RECEIPT OF TCTO CHANGES	51
C81 INVESTIGATE ACCIDENTS OR INCIDENTS	51
C65 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	49
L301 INSPECT ENGINE PLUMBING	49
L303 INSPECT ENGINES BEFORE OR AFTER OPERATION	49
C75 EVALUATE SAFETY PROGRAMS	49
C68 EVALUATE INSPECTION REPORTS OR PROCEDURES	48
L308 INSPECT SAFETY DEVICES	48
L298 INSPECT ENGINE CONTROLS	48
E140 MAKE ENTRIES ON TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT REPORT AND REPLY FORMS (AFTO FORM 22)	48
B62 WRITE CORRESPONDENCE	44
L299 INSPECT ENGINE EXHAUST CONES	41
C85 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS	41
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	41
C77 EVALUATE SUGGESTIONS	39
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	38
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	38
G165 INSPECT AIRCRAFT THROTTLE CONTROLS FOR FREEDOM OF MOVEMENT	38

TABLE XIII (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

KC-135	10%
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ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

TABLE XIV  
QEC KIT MONITORS  
(GRP329)

TASKS	PERCENT MEMBERS PERFORMING (N=17)
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	94
H208 INSPECT QUICK ENGINE CHANGE (QEC) KITS	82
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	82
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	82
E121 MAINTAIN QUICK ENGINE CHANGE (QEC) KIT HISTORICAL RECORDS	76
F147 INSPECT QUICK ENGINE CHANGE (QEC) KIT FORMS	71
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	71
H230 PREPARE QEC KITS FOR STORAGE	65
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	65
L291 CLEAN FACILITIES	65
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	59
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	59
L301 INSPECT ENGINE PLUMBING	59
L302 INSPECT ENGINE TRAILERS OR STANDS	59
A11 DEVELOP WORK METHODS OR PROCEDURES	59
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	59
F146 INSPECT ENGINE OR ASSOCIATED EQUIPMENT FOR CORROSION CONTROL	53
A6 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL OTHER THAN AFSC 426X2/426X3	53
L289 CLEAN ENGINE PARTS USING CLEANERS OTHER THAN ULTRASONIC CLEANERS	53
A9 DETERMINE WORK PRIORITIES	53
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	53
H218 MAINTAIN ENGINE TRAILERS OR STANDS	47
L294 INSPECT AFTERBURNERS	47
E109 CUT STENCILS	47
D89 CONDUCT OJT	47
H224 PACK OR UNPACK AFTERBURNERS IN SHIPPING CONTAINERS	47
H195 ASSEMBLE OR DISASSEMBLE AFTERBURNERS	41
E111 INITIATE WORK ORDER REQUESTS	41
B54 SUPERVISE APPRENTICE JET ENGINE MECHANICS (AFSC 42632)	41
H217 MAINTAIN ENGINE ACCESSORY SHOP EQUIPMENT	35

TABLE XIV (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

F-4	41%	WC-130	12%
C-130	24%	B-52	12%
KC-135	18%		

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

J-79	35%
T-56	18%
TF-33	12%

TABLE XV  
SUPPLY SUPPORT PERSONNEL CLUSTER  
(GRP042)

TASKS	PERCENT MEMBERS PERFORMING (N=204)
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	76
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	66
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	63
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	61
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	58
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	57
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	49
A3 COORDINATE CALIBRATION OF TEST EQUIPMENT WITH THE PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL)	41
E113 MAINTAIN CALIBRATION RECORDS	38
E112 MAINTAIN BENCH STOCK LISTINGS	36
H221 MAINTAIN TOOL CRIBS	34
B52 REVIEW TEST EQUIPMENT CALIBRATION SCHEDULES	32
L339 MAINTAIN SPECIAL TOOLS	31
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	28
E138 MAKE ENTRIES ON SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244)	28
E109 CUT STENCILS	28
A4 COORDINATE SUPPLY ACTIVITIES WITH SUPPLY OR ENGINE MANAGERS	27
C82 PREPARE APRs	27
H213 ISSUE SPECIAL TOOLS	26
E114 MAINTAIN CUSTODIAN ACCOUNTS OR CUSTODIAN RECEIPTS	25
C66 EVALUATE DUE IN FROM MAINTENANCE (DIFM) REPORTS	24
E128 MAKE ENTRIES ON CUSTODIAN REQUEST/RECEIPT FORMS (AF FORM 601b)	24
E132 MAKE ENTRIES ON PAPERWORK FOR BENCH CHECK ITEMS	23
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	21
A9 DETERMINE WORK PRIORITIES	20
E124 MAINTAIN TECHNICAL ORDER PUBLICATION FILES	20

TABLE XV (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

TABLE XVa  
MATERIEL-AGE SUPPORT PERSONNEL  
(GRP102)

TASKS	PERCENT NUMBERS PERFORMING (N=84)
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	88
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	80
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	71
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	70
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	67
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	58
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	43
E138 MAKE ENTRIES ON SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244)	32
L302 INSPECT ENGINE TRAILERS OR STANDS	31
M420 TOW NONPOWERED AGE	26
E112 MAINTAIN BENCH STOCK LISTINGS	26
F145 INSPECT AREAS FOR FOREIGN OBJECT DAMAGE (FOD) MATTER	25
H218 MAINTAIN ENGINE TRAILERS OR STANDS	23
E109 CUT STENCILS	21
C82 PREPARE APRs	19
F146 INSPECT ENGINES OR ASSOCIATED EQUIPMENT FOR CORROSION CONTROL	18
A9 DETERMINE WORK PRIORITIES	17
E132 MAKE ENTRIES ON PAPERWORK FOR BENCH CHECK ITEMS	15



TABLE XVa (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

F-100

10%

TABLE XVb  
TOOL CRIB PERSONNEL  
(GRP220)

TASKS	PERCENT MEMBERS PERFORMING (N=87)
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	93
A3 COORDINATE CALIBRATION OF TEST EQUIPMENT WITH THE PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL)	87
E113 MAINTAIN CALIBRATION RECORDS	80
E137 MAKE ENTRIES ON SUPPLY ISSUE/TURN-IN REQUEST FORMS (AF FORM 2005)	78
E134 MAKE ENTRIES ON REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	74
H221 MAINTAIN TOOL CRIBS	71
B52 REVIEW TEST EQUIPMENT CALBRATION SCHEDULES	70
L339 MAINTAIN SPECIAL TOOLS	63
E141 MAKE ENTRIES ON UNSERVICEABLE (CONDEMNED) TAG OR LABEL FORMS (DD FORM 1577 OR DD FORM 1577-1)	62
E112 MAINTAIN BENCH STOCK LISTINGS	59
H213 ISSUE SPECIAL TOOLS	57
E135 MAKE ENTRIES ON SERVICEABLE TAG OR SERVICEABLE LABEL FORMS (DD FORM 1574 OR DD FORM 1574-1)	56
E142 MAKE ENTRIES ON UNSERVICEABLE (REPARABLE) TAG OR LABEL FORMS (DD FORM 1577-2 OR DD FORM 1577-3)	56
A4 COORDINATE SUPPLY ACTIVITIES WITH SUPPLY OR ENGINE MANAGERS	53
E114 MAINTAIN CUSTODIAN ACCOUNTS OR CUSTODIAN RECEIPTS	49
E128 MAKE ENTRIES ON CUSTODIAN REQUEST/RECEIPT FORMS (AF FORM 601B)	45
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	44
C82 PREPARE APRs	43
C66 EVALUATE DUE IN FROM MAINTENANCE (DIFM) REPORTS	41
E109 CUT STENCILS	41
E132 MAKE ENTRIES ON PAPERWORK FOR BENCH CHECK ITEMS	37
E117 MAINTAIN EQUIPMENT CONTROL LISTINGS (ECL)	37
E138 MAKE ENTRIES ON SYSTEM/EQUIPMENT STATUS RECORD FORMS (AFTO FORM 244)	34
E120 MAINTAIN NONDESTRUCTIVE INSPECTION (NDI) RECORDS	33
C73 EVALUATE PROCEDURES FOR STORAGE, INVENTORY, OR INSPECTION OF PROPERTY ITEMS	33
E124 MAINTAIN TECHNICAL ORDER PUBLICATION FILES	32
A8 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	32
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	31
B57 SUPERVISE JET ENGINE MECHANICS (AFSC 42652)	30

TABLE XVb (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

TF-33

10%

TABLE XVI  
TECHNICAL ORDER MONITORS  
(GRP346)

TASKS	PERCENT MEMBERS PERFORMING (N=14)
E124 MAINTAIN TECHNICAL ORDER PUBLICATION FILES	100
E125 MAINTAIN TO OR STANDARD PUBLICATION READING FILES	93
F155 REVIEW CHANGES IN TECHNICAL ORDERS (TOs)	79
A15 ESTABLISH PUBLICATION LIBRARIES	50
F157 VERIFY RECEIPT OF TCTO CHANGES	43
E140 MAKE ENTRIES ON TECHNICAL ORDER SYSTEM PUBLICATION IMPROVEMENT REPORT AND REPLY FORMS (AFTO FORM 22)	43
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	36
E139 MAKE ENTRIES ON TCTO RECORDS	21
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	21
E122 MAINTAIN REGULATIONS, MANUALS, OR LOCAL OPERATING INSTRUCTIONS	21
C74 EVALUATE REPORTS OF DEFICIENCIES	14
C73 EVALUATE PROCEDURES FOR STORAGE, INVENTORY, OR INSPECTION OF PROPERTY ITEMS	14
E133 MAKE ENTRIES ON PERSONNEL AVAILABILITY FORECAST FORMS (AF FORM 2405)	14
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	14
A16 PARTICIPATE IN PREDOCK OR TIME COMPLIANCE TECHNICAL ORDER (TCTO) MEETINGS	14
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	14
A23 PREPARE STATUS REPORTS	14
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	14
B48 INTERVIEW NEWLY ASSIGNED PERSONNEL	14
D106 SCORE TESTS	14
D86 ADMINISTER TESTS	14
D92 COUNSEL TRAINEES ON TRAINING PROGRESS	14
D99 ESTABLISH STUDY REFERENCE FILES	14
D91 CONDUCT TRAINING CONFERENCES OR BRIEFINGS	14

TABLE XVI (CONTINUED)  
SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

TABLE XVII  
ENGINE RECORDS MAINTENANCE PERSONNEL  
(GRP202)

TASKS	PERCENT MEMBERS PERFORMING (N=14)
A23 PREPARE STATUS REPORTS	93
B39 DIRECT PREPARATION OR MAINTENANCE OF RECORDS OR REPORTS	86
E126 MAINTAIN TURBINE WHEEL RECORDS	86
E115 MAINTAIN ENGINE LOCATION OR STATUS FILES	79
E123 MAINTAIN SIGNIFICANT HISTORICAL DATA FORMS (AFTO FORM 95)	79
E130 MAKE ENTRIES ON MAINTENANCE DATA COLLECTION RECORD FORMS (AFTO FORM 349)	79
B31 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	71
E119 MAINTAIN JET ENGINE OR AFTERBURNER HISTORICAL RECORDS	71
E129 MAKE ENTRIES ON ENGINE STATUS REPORT FORMS (AF FORM 1534)	57
E118 MAINTAIN HISTORICAL TECHNICAL INSTRUCTION COMPLIANCE RECORDS	57
B26 ADVISE MAINTENANCE OFFICERS ON ENGINE MAINTENANCE ACTIVITIES	57
E121 MAINTAIN QUICK ENGINE CHANGE (QEC) KIT HISTORICAL RECORDS	57
B27 CALL IN ENGINE STATUS REPORTS	50
A7 COORDINATE WORK ON ENGINE COMPONENTS WITH PERSONNEL WITH AFSC 426X2/426X3	50
E139 MAKE ENTRIES ON TCTO RECORDS	50
E127 WRITE CORRESPONDENCE	50
E116 MAINTAIN ENGINE MASTER ROSTER LISTINGS	50
E127 MAKE ENTRIES ON AIRCRAFT FLIGHT AND MAINTENANCE RECORDS (AFTO FORM 781 SERIES)	36
C82 PREPARE APRs	36
A9 DETERMINE WORK PRIORITIES	36
C74 EVALUATE REPORTS OF DEFICIENCIES	36
E124 MAINTAIN TECHNICAL ORDER PUBLICATION FILES	36
A10 DEVELOP ORGANIZATIONAL CHARTS	36
A5 COORDINATE TECHNICAL ENGINE PROBLEMS WITH DEPOT	36
F147 INSPECT QUICK ENGINE CHANGE (QEC) KIT FORMS	29
E110 DRAFT MATERIEL DEFICIENCY REPORTS	29
E122 MAINTAIN REGULATIONS, MANUALS, OR LOCAL OPERATING INSTRUCTIONS	29
E125 MAINTAIN TO OR STANDARD PUBLICATION READING FILES	29
A16 PARTICIPATE IN PREDOCK OR TIME COMPLIANCE TECHNICAL ORDER (TCTO) MEETINGS	29
E111 INITIATE WORK ORDER REQUESTS	29

TABLE XVII (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

GTC-85-70/70A	14%
GTCP-85-397	14%
J-57	14%

TABLE XVIII  
FORMAL TRAINING PERSONNEL  
(GRP054)

TASKS	PERCENT MEMBERS PERFORMING (N=64)
D86 ADMINISTER TESTS	72
D93 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	66
D106 SCORE TESTS	66
D92 COUNSEL TRAINEES ON TRAINING PROGRESS	61
D107 WRITE TEST QUESTIONS	56
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	52
D101 EVALUATE PROGRESS OF RESIDENT COURSE STUDENTS	52
D90 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	47
D105 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	44
D102 EVALUATE TRAINING METHODS OR TECHNIQUES	39
B29 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	34
D98 DIRECT OR IMPLEMENT TRAINING PROGRAMS OTHER THAN OJT	25
D89 CONDUCT OJT	25
D100 EVALUATE OJT TRAINEES	25
B49 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	25
E124 MAINTAIN TECHNICAL ORDER PUBLICATION FILES	23
D94 DETERMINE OJT TRAINING REQUIREMENTS	23
D91 CONDUCT TRAINING CONFERENCES OR BRIEFINGS	22
B47 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	22



100

TABLE XVIII (CONTINUED)

SELECTED BACKGROUND INFORMATION

AIRCRAFT MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

ENGINES/PROPELLERS MAINTAINED  
(10 PERCENT OR MORE RESPONDING)

NONE

